

001

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL

1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>		5. MINERAL LEASE NO: ML-47077	6. SURFACE: State
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>		7. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
2. NAME OF OPERATOR: The Houston Exploration Company		8. UNIT or CA AGREEMENT NAME:	
3. ADDRESS OF OPERATOR: 1100 Louisiana Suite 20 CITY Houston STATE TX ZIP 77002		9. WELL NAME and NUMBER: Buck Camp 4-36	
PHONE NUMBER: (713) 830-6800		10. FIELD AND POOL, OR WILDCAT: Undesignated	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 494' FNL & 482' FWL <i>636033X 39.822988</i> <i>4409110Y 109.410528</i> AT PROPOSED PRODUCING ZONE: Same as above		11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 36 11S 22E	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 62.6 miles South of Vernal Utah		12. COUNTY: Uintah	13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) 482	16. NUMBER OF ACRES IN LEASE: 320	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) N/A	19. PROPOSED DEPTH: 6,960	20. BOND DESCRIPTION: 104155044	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 5383.1	22. APPROXIMATE DATE WORK WILL START: 2/15/2005	23. ESTIMATED DURATION: 30 days	

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
11"	8 5/8" J-55 36#	2,000	PRIMIUM LITE II 250 SKS 3.38CF 11.0 PPG
			CLASS "G" 329 SKS 1.2 CF 15.6 PPG
			CALCIUM CHLORIDE 200 SKS 1.10 CF 15.6 PPG
7 7/8"	4 1/2" N-80 11.6#	8,000	PRIMIUM LITE II 200 SKS 3.3 CF 11.0 PPG
			CLASS "G" 400 SKS 1.56 CF 14.3 PPG

25.

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

- ☒ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
☒ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER

- ☒ COMPLETE DRILLING PLAN
☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) William A. RyanTITLE Agent

SIGNATURE _____

DATE 1/25/2005

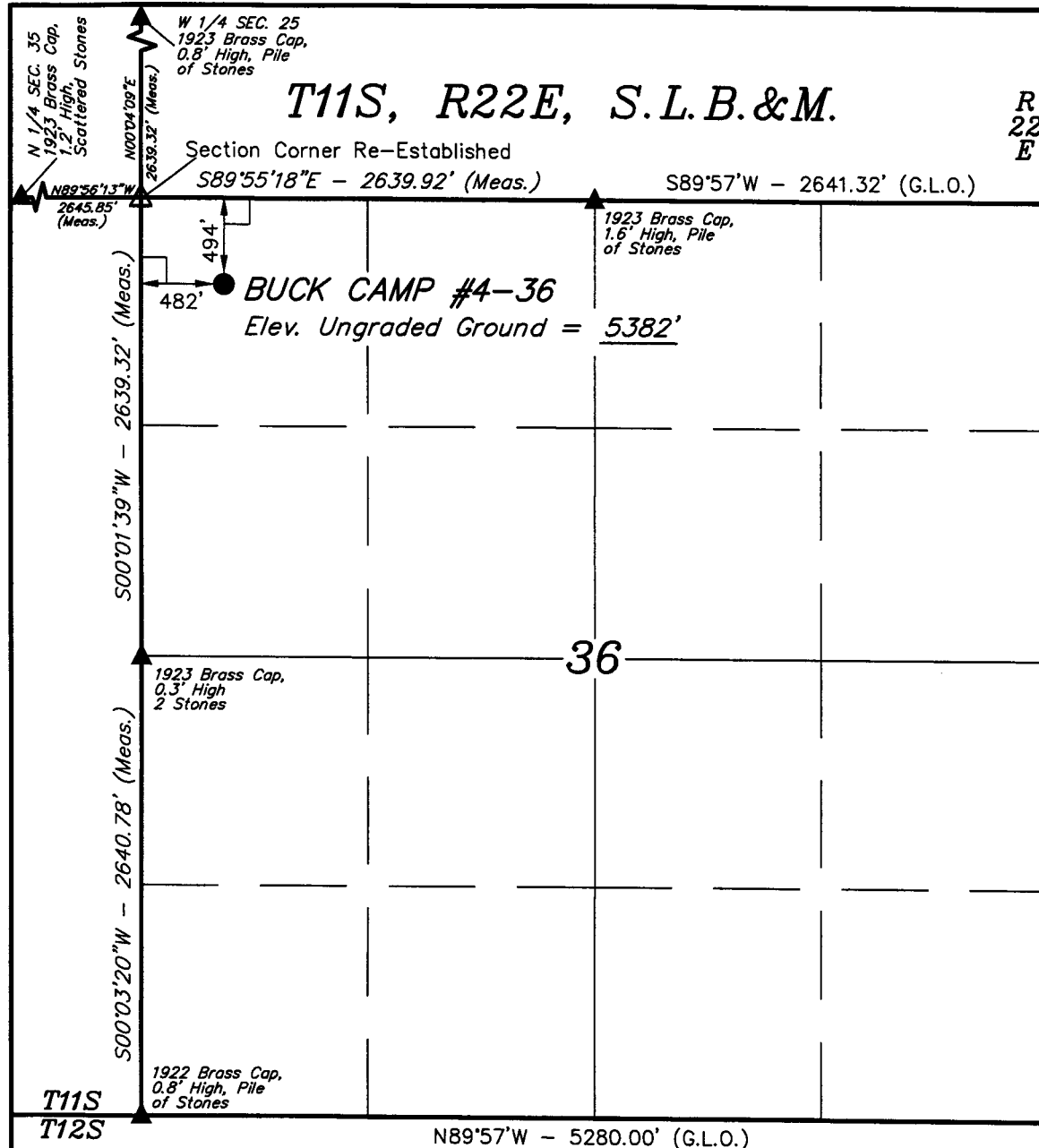
(This space for State use only)

API NUMBER ASSIGNED: 43-047-36277

Approved by the
Utah Division of
Oil, Gas and Mining

Date: 01-21-05By: [Signature]**RECEIVED****FEB 02 2005**

DIV. OF OIL, GAS & MINING



THE HOUSTON EXPLORATION COMPANY

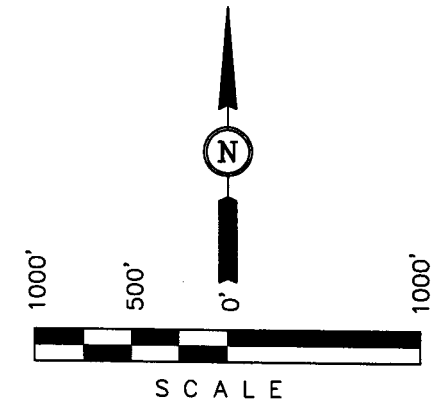
Well location, BUCK CAMP #4-36, located as shown in the NW 1/4 NW 1/4 of Section 36, T11S, R22E, S.L.B.&M. Uintah County, Utah.

BASIS OF ELEVATION

BENCH MARK 87 EAM LOCATED IN THE SW 1/4 OF SECTION 1, T12S, R23E, S.L.B.&M. TAKEN FROM THE ARCHY BENCH SE, QUADRANGLE, UTAH, UTAH COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5887 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST - VERNAL, UTAH 84078
(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 11-30-04	DATE DRAWN: 1-3-05
PARTY B.B. J.M. E.C.O.	REFERENCES G.L.O. PLAT	
WEATHER COOL	FILE THE HOUSTON EXPLORATION COMPANY	

The Houston Exploration Company
1100 Louisiana, Suite 2000
Houston, TX 77002
713-830-6800

Please hold all information associated with this Application for Permit to Drill and all associated logs confidential for a minimum of six (6) months.

RECEIVED

FEB 02 2005

DIV. OF OIL, GAS & MINING

Ten Point Plan**The Houston Exploration Company
Buck Camp #4-36**

Surface Location NW ¼ NW ¼, Section 36, T. 11S., R. 22E.

1. Surface Formation

Green River

2. Estimated Formation Tops and Datum:

<u>Formation</u>	<u>Depth</u>	<u>Datum</u>
Green River	Surface	+5,383' G.L.
Uteland Butte Limestone	3,946	+1,437'
Wasatch	4,080	+1,303'
Mesaverda	5,747	-364'
Buck Tounge	8,080	-2,697'
Castlegate	8,152	-2,769'
TD	6,960	-1,577'

A 11" hole will be drilled to 2,000' +/- . The hole depth will depend on the depth that the Birds Nest Zone is encountered. The hole will be drilled 400' beyond the top of the Birds Nest.

3. Producing Formation Depth:

Formation objective includes the Green River, Wasatch, Mesaverde and its sub-members.

4. Proposed Casing:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight/FT</u>	<u>Grade</u>	<u>Coupling & Tread</u>	<u>Casing Depth</u>	<u>New/Used</u>
11	8 5/8	36#	J-55	STC	2000	NEW
7 7/8	4 1/2	11.6#	N-80	LTC	T.D.	NEW

Cement Program:

The Surface Casing will be cemented to the Surface as follows:

	<u>Casing Size</u>	<u>Cement Type</u>	<u>Cement Amounts</u>	<u>Cement Yield</u>	<u>Cement Weight</u>
Lead:	8 5/8	Primium Lite II .05#/sk Static Free .25#/sk Cello Flake 5#/sk KOL Seal .002 gps FP-6L 10% Bentonite .5% Sodium Metasilicate 3% Potassium Chloride	250 sks. +/-	3.38ft ³ /sk	11.0 ppg
Tail:	8 5/8	Class "G" 2% Calcium Chloride .25#/sk Cello Flake	329 sks. +/-	1.2ft ³ /sk	15.6 ppg
Top Job:	8 5/8	4% Calcium Chloride .25#/sk Cello Flake	200 sks. +/-	1.10ft ³ /sk	15.6 ppg

Production casing will be cemented to 2,500' or higher as follows:

	<u>Casing Size</u>	<u>Cement Type</u>	<u>Cement Amounts</u>	<u>Cement Yield</u>	<u>Cement Weight</u>
Lead:					
	4 1/2	Primium Lite II .25#/sk Cello Flake .05#/sk Static Free 5#/sk Kol Seal 3% Potassium Chloride .055 gps FP-6L 10% Bentonite .5 Sodium Metasilicate	200 sks +/-	3.3ft ³ /sk	11.0 ppg
Tail:					
	4 1/2	Class "G" .05% Static Free 2 Sodium Chloride .1% R-3 2% Bentonite	400 sks +/-	1.56ft ³ /sk	14.3 ppg

5. BOP and Pressure Containment Data:

The anticipated bottom hole pressure will be less than 3000 psi.

A 3000-psi WP BOP system as described in the BOP and Pressure Containment Data (attached) will be installed and maintained from the 8 5/8" surface casing. The BOP system including the casing will be pressure tested to minimum standards set forth in "On Shore Order #2". The BOP will be mechanically checked daily during the drilling operation.

6. Mud Program:

<u>Interval</u>	<u>Mud weight lbs./gal.</u>	<u>Viscosity Sec./OT.</u>	<u>Fluid Loss Ml/30 Mins.</u>	<u>Mud Type</u>
0-2000	Air/Clear Water	-----	No Control	Water/Gel
2000-T.D.	8.4-12.0	30	8-10	Water/Gel

7. Auxiliary Equipment

Upper Kelly cock, full opening stabbing valve, 2 ½" choke manifold and pit level indicator.

8. Testing, Coring, Sampling and Logging:

- a) Test: None are anticipated.
- b) Coring: There is the possibility of sidewall coring.
- c) Sampling: Every 10' from 2000' to T.D.
- d) Logging:

Type	Interval
DLL/SFL W/GR and SP	T.D. to Surf. Csg
FDC/CNL W/GR and CAL	T.D. to Surf. Csg

9. Abnormalities (including sour gas):

No abnormal pressures, temperatures or other hazards are anticipated. Oil and gas shows are anticipated in the Wasatch Formation. Other wells drilled in the area have not encountered over pressured zones or H₂S.

10. Drilling Schedule:

The anticipated starting date is February 15, 2005. Duration of operations is expected to be 30 days.

THE HOUSTON EXPLORATION COMPANY

13 POINT SURFACE USE PLAN

FOR WELL

BUCK CAMP #4-36

LOCATED IN NW ¼ NW ¼

SECTION 36, T.11S, R22E, S.L.B.&M.

UINTAH COUNTY, UTAH

LEASE NUMBER: ML-47077

SURFACE OWNERSHIP: STATE

1. Existing Roads:

To reach The Houston Exploration Co well Buck Camp 4-36 in Section 36, T11S, R 22 E, Starting in Vernal, Utah.

Proceed in a westerly direction from Vernal, Utah along U.S. Highway 40 approximately 14.0 miles to the junction of State Highway 88; exit left and proceed in a southerly direction approximately 17.0 miles to Ouray, Utah; proceed in a southerly, then southeasterly direction approximately 11.2 miles on the Seep Ridge Road to the junction of this road and an existing road to the southeast; turn left and proceed in a southeasterly direction approximately 9.2 miles to the junction of this road and an existing road to the east; turn left and proceed in an easterly direction approximately 2.7 miles to the junction of this road and an existing road to the east; proceed in an easterly, then southerly direction approximately 8.4 miles to the junction of this road and an existing road to the southeast; proceed in a southeasterly, direction approximately 0.1 miles to the beginning of the proposed access to the southwest; follow road flags in a southwesterly, direction approximately 40' to the proposed location

Total distance from Vernal, Utah to the proposed well location is approximately 62.6 miles.

All existing roads to the proposed location are State of Utah, BLM maintained or County Class D roads. Please see the attached map for additional details.

2. Planned access road

The proposed access road will be approximately 40' +/- of new construction on lease. The road will be graded once per year minimum and maintained.

A) Approximate length	40 ft
B) Right-of-Way width	30 ft
C) Running surface	18 ft
D) Surface material	Native soil
E) Maximum grade	5%
F) Fence crossing	None
G) Culvert	None
H) Turnouts	None
I) Major cuts and fills	None
J) Road Flagged	Yes
K) Access road surface ownership	State
L) All new construction on lease	Yes
M) Pipe line crossing	No

Please see the attached location plat for additional details.

An off lease Right-of-Way will not be required.

All surface disturbances for the road and location will be within the lease boundary.

3. Location of existing wells

The following wells are located within a one-mile radius of the location site.

A) Producing well	None
B) Water well	None
C) Abandoned well	None
D) Temp. abandoned well	None
E) Disposal well	None
F) Drilling /Permitted well	None
G) Shut in wells	None
H) Injection well	None
I) Monitoring or observation well	None

Please see the attached map for additional details.

4. Location of tank batteries, production facilities and production gathering service lines.

All production facilities are to be contained within the proposed location site. Please see the attached plat plan for a typical gas well separator installation and well site piping.

All permanent (on site for more than six months or longer) structures constructed or installed will be painted a **Carlsbad Canyon** color. Facilities required to comply with O.S.H.A. (Occupational Safety and Health Act) will be excluded. The required paint color is **Carlsbad Canyon**.

All tanks will be surrounded by a dike of sufficient capacity to contain the storage capacity of the largest tank in the battery. The integrity of the dike will be maintained.

The operator will adhere to all site security guidelines and regulation identified in 43 cfr 3126.7.

All off lease storage, off lease measurement, commingling on lease or off lease, of production, will have prior written approval from the authorized officer.

If the well is capable of economic production a surface gas line will be required.

Approximately 600' +/- of 3" pipeline would be constructed on State Lands. The line would tie into the proposed pipeline in Section 36, T11S, R22E. The line will be strung and boomed to the north and the west of the access road and location.

An off lease Right-of-Way will not be required.

Please see the attached location diagrams for pipe-line location. There will be no additional surface disturbances required for the installation of a gathering line.

The gas meter run will be located within 500' of the wellhead. The gas line will be buried or anchored down from the wellhead to the meter. Meter runs will be housed and/or fenced.

The gas meter will be calibrated and the tank strapped in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. The authorized officer will be provided with a date and time for the initial meter calibration and all future meter-

proving schedules. A copy of the meter calibration report will be submitted to the BLM's Vernal District office and State of Utah, Division of Oil, Gas, and Mining. All measurement facilities will conform to API (American Petroleum Institute) and AGA (American Gas Association) standards for gas and liquid hydrocarbon measurement.

5. Location and type of water supply

Water for drilling and cementing will come from Bitter Creek Permit # - T75377.

6. Source of construction materials

All construction material for this location site and access road shall be borrow material accumulated during construction of the location site and access road. Additional road gravel or pit lining material will be obtained from private resources.

7. Methods for handling waste disposal

A) Pit construction and liners:

The reserve pit will be approximately **12 ft.** deep and most of the depth shall be below the surface of the existing ground. Please see the attached plat for details.

The reserve pit will be lined.

The reserve pit will be used to store water for drilling. A semi-closed system will be used to drill the well. All fresh water for drilling will come from a frac tank placed on location and from the rig tank. The pit will be used to hold non-flammable materials such as cuttings, salt, drilling fluids, chemicals, produced fluids, etc.

B) Produced fluids:

Produced water will be confined to the reserve pit, or if deemed necessary, a storage tank for a period not to exceed 90 days after initial production. During the 90-day period an application for approval for permanent disposal method and location will be submitted to the authorized officer.

C) Garbage:

A trash cage fabricated from expanded metal will be used to hold trash on location and will be removed to an authorized landfill location.

D) Sewage:

A portable chemical toilet will be supplied for human waste.

E) Site clean-up:

After the rig is moved off the location the well site area will be cleaned and all refuse removed.

8. Ancillary facilities

There are no ancillary facilities planned at this time and none are foreseen for the future.

9. Well-site layout

Location dimensions are as follows:

A) Pad length	345 ft
B) Pad width	200 ft
C) Pit depth	12 ft
D) Pit length	175 ft
E) Pit width	60 ft
F) Max cut	14.8 ft
G) Max fill	3.2 ft
H) Total cut yds.	5,830 cu yds
I) Pit location	east side
J) Top soil location	west end
K) Access road location	northeast end
L) Flare Pit	corner B

Please see the attached location diagram for additional details.

All pits will be fenced according to the following minimum standards:

- A) Thirty nine inch net wire shall be used with at least one strand of wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- B) The net wire shall be no more than 2 inches above the ground. The barbed wire shall be 3 inches above the net wire. Total height of the fence shall be at least 42 inches.

- C) Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

- D) Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two posts shall be no greater than 16 ft.

- E) All wire shall be stretched by using a stretching device before it is attached to the corner posts.

10. Plans for restoration of the surface

Prior to construction of the location, the top 6 inches of soil material will be stripped off the location and the pit area. The topsoil removed and piled will amount to approximately **1,460** cubic yards of material. Topsoil will be stockpiled in one distinct pile. Placement of the topsoil is noted on the attached location plat. The topsoil pile from the location will be seeded as soon as the soil is stock piled with the seed mix listed. When all drilling and completion activities have been completed and the pit back-filled the topsoil from the pit area will be spread on the pit area. The pit area will be seeded when the soil has been spread. The unused portion of the location (the area outside the dead men) will be re-contoured.

The dirt contractor will be provided with an approved copy of the surface use plan prior to construction activities.

Changes to the drainage during the construction activities shall be restored to its original line of flow or as near as possible when the pit is back-filled

All disturbed areas will be re-contoured to the approximate natural contours. Prior to back filling the pit the fences around the reserve pit will be removed.

The reserve pit will be reclaimed within 90 days of well completion. If the reserve pit has not dried sufficiently to allow back filling, an extension on the time requirement for back filling the pit will be requested. Once reclamation activities have begun, they shall be completed within 30 days.

After the reserve pit has been reclaimed, no depressions in the soil covering the reserve pit will be allowed. The objective is to keep seasonal rainfall and run off from seeping into the soil used to cover the reserve pit. Diversion ditches and water bars will be used to divert the run off as needed.

When restoration activities have been completed, the location site and new access road cuts and shoulders shall be reseeded. Prior to reseeding, all disturbed areas will be scarified. And left with a rough surface.

A) Seeding dates:

Seed will be spread when topsoil is stock piled and when reclamation work is performed.

The seed mix and quantity list will be used whether the seed is broadcast or drilled.

B) Seed Mix

To be determined by the Authorized Officer.

11. Surface ownership:

Access road	State
Location	State
Pipe line	State

12. Other information:

A) Vegetation

The vegetation coverage is Slight. The majority of the existing vegetation consists of Sagebrush. Rabbit brush, Bitter Brush, and Indian Rice grass are also found on the location.

B) Dwellings:

There are no dwelling or other facilities within a one-mile radius of the location.

C) Archeology:

The location has been surveyed. A copy of that survey will be forwarded to your office.

If, during operations, any archaeological or historical sites, or any objects of antiquity (subject to the antiquities act of June 8, 1906) are discovered, all operations which would affect such sites will be suspended and the discovery reported promptly to the surface management agency.

At least twenty-four (24) hours prior to initial pressure tests.

- f) First production notice
Within five (5) business days after the new well begins, or production resumes after well has been off production for more than 90 days.

D) Water:

The nearest water is the White River located approximately 7 miles to the South.

E) Chemicals:

No pesticides, herbicides or other possible hazardous chemicals will be used without prior application.

F) Notification:

- a) Location Construction
At least forty eight (48) hours prior to construction of location and access roads.
- b) Location completion
Prior to moving on the drilling rig.
- c) Spud notice
At least twenty-four (24) hours prior to spudding the well.
- d) Casing string and cementing
At least twenty-four (24) hours prior to running casing and cementing all casing strings.
- e) BOP and related equipment tests

G) Flare pit:

The flare pit will be located in corner B of the reserve pit outside the pit fences and 100 feet from the bore hole on the east side of the location. All fluids will be removed from the pit within 48 hours of occurrence.

13. Lessees or Operator's representative and certification

A) Representative

William A. Ryan
Rocky Mountain Consulting
Vernal, UT 84078

Office 435-789-0968
Fax 435-789-0970
Cellular 435-828-0968

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, onshore oil and gas orders, and any applicable notices to lessees. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field

representative to ensure compliance.

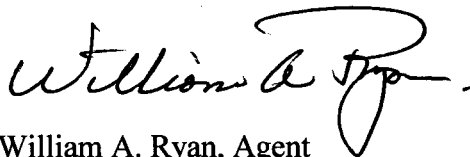
Onsite Dates:

This drilling permit will be valid for a period of one year from the date of approval. After permit termination, a new application will be filed for approval for any future operations.

B) Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill-site and access route, that I am familiar with the conditions which presently exist, that the statements made in this plan are, to the best of my knowledge and belief, true and correct, and that the work associated with the operation proposed herein will be preformed by The Houston Exploration Company and its contractors and subcontractors in conformity with this plan and terms and conditions with this plan and the terms and conditions under which it is approved.

Date 11/25/05

A handwritten signature in black ink, appearing to read "William A. Ryan", with a stylized flourish at the end.

William A. Ryan, Agent
Rocky Mountain Consulting

THE HOUSTON EXPLORATION COMPANY

BUCK CAMP #4-36

LOCATED IN UINTAH COUNTY, UTAH
SECTION 36, T11S, R22E, S.L.B.&M.



PHOTO: VIEW OF LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: WESTERLY



- Since 1964 -

UELS Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS

12 19 04
MONTH DAY YEAR

PHOTO

TAKEN BY: B.B.

DRAWN BY: C.P.

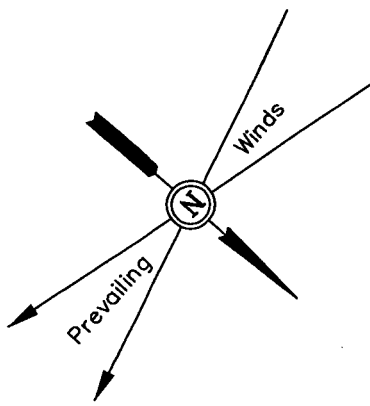
REVISED: 00-00-00

THE HOUSTON EXPLORATION COMPANY

FIGURE #1

LOCATION LAYOUT FOR

BUCK CAMP #4-36
SECTION 36, T11S, R22E, S.L.B.&M.
494' FNL 482' FWL



SCALE: 1" = 50'
DATE: 1-5-05
Drawn By: E.C.O.

NOTE:

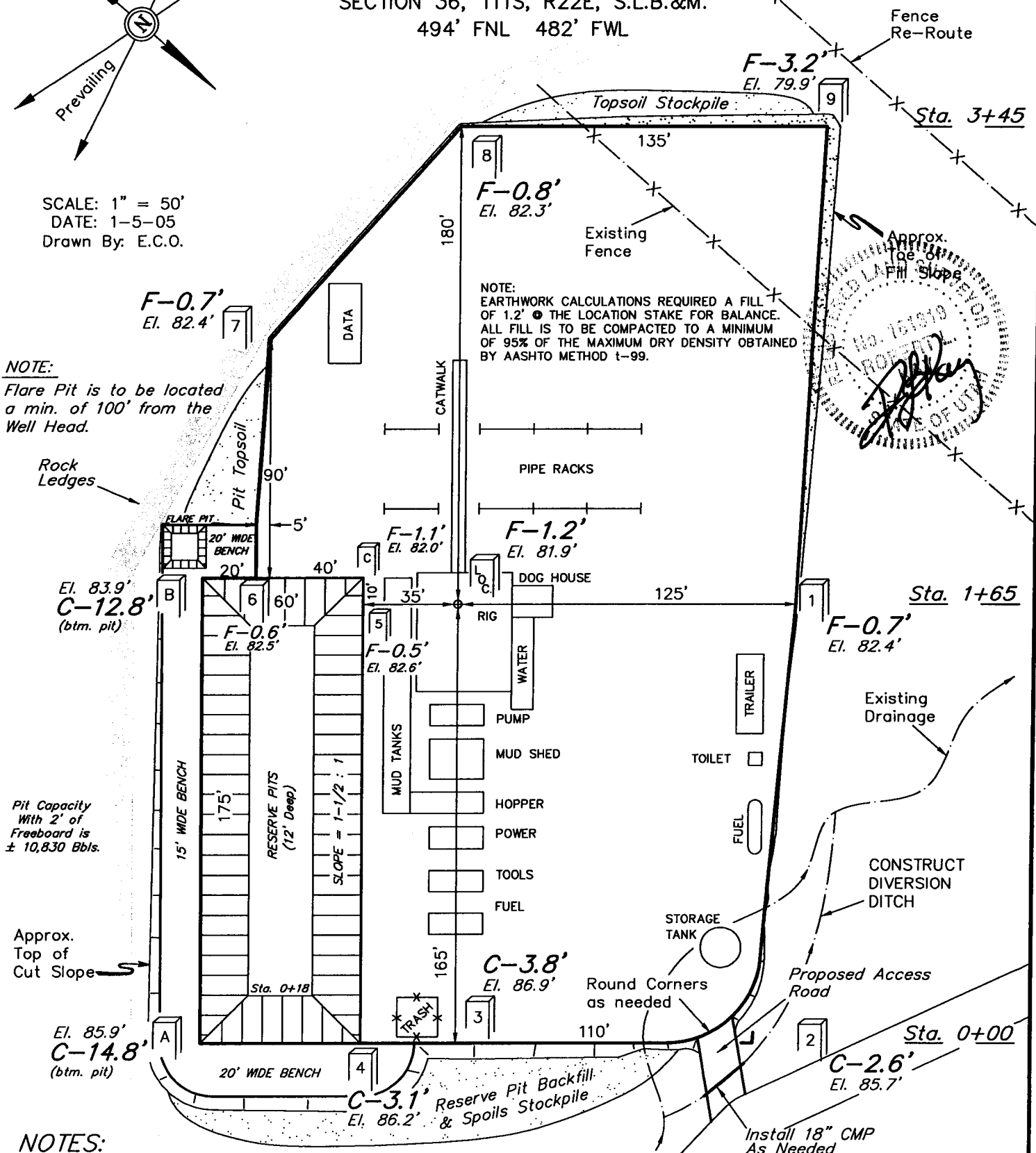
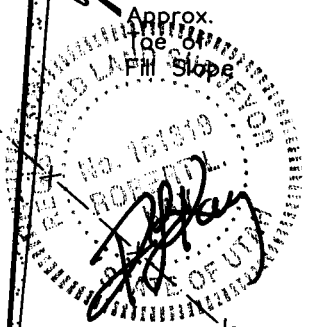
Flare Pit is to be located a min. of 100' from the Well Head.

Rock Ledges

Pit Capacity With 2' of Freeboard is $\pm 10,830$ Bbls.

Approx. Top of Cut Slope

NOTE:
EARTHWORK CALCULATIONS REQUIRED A FILL OF 1.2' @ THE LOCATION STAKE FOR BALANCE. ALL FILL IS TO BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY OBTAINED BY AASHTO METHOD T-99.



NOTES:

Elev. Ungraded Ground At Loc. Stake = 5381.9'

FINISHED GRADE ELEV. AT LOC. STAKE = 5383.1'

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

THE HOUSTON EXPLORATION COMPANY

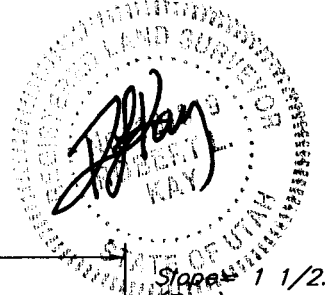
FIGURE #2

TYPICAL CROSS SECTIONS FOR

BUCK CAMP #4-36

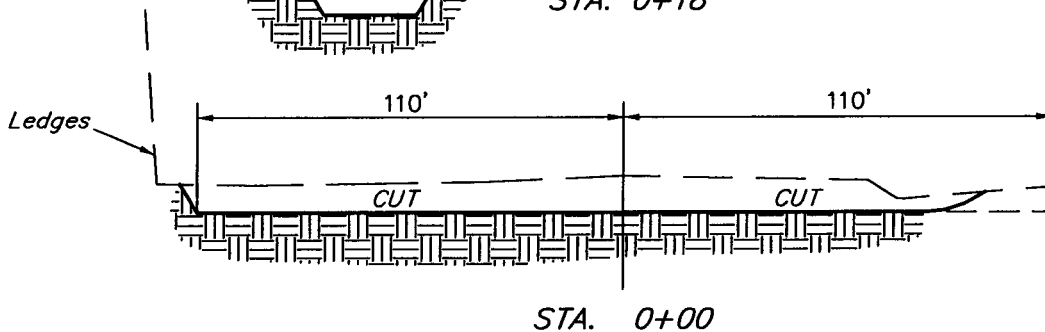
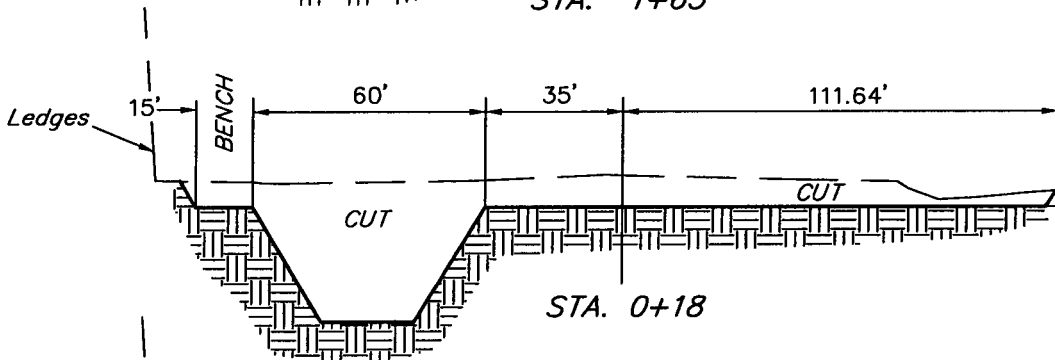
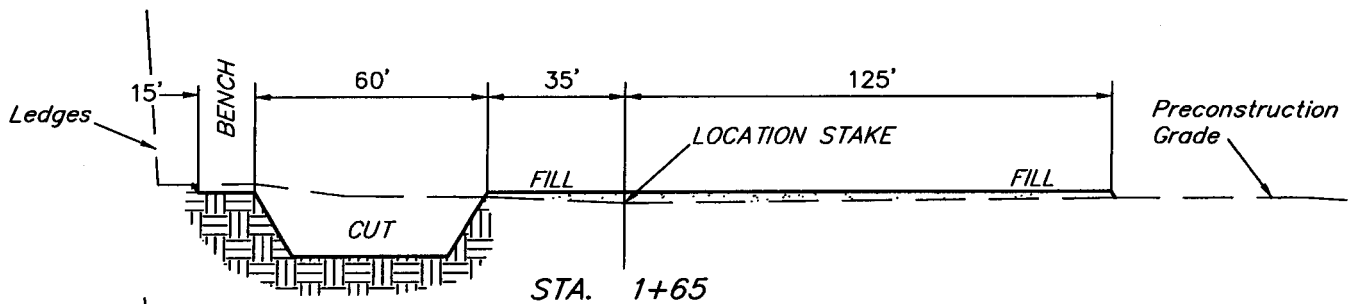
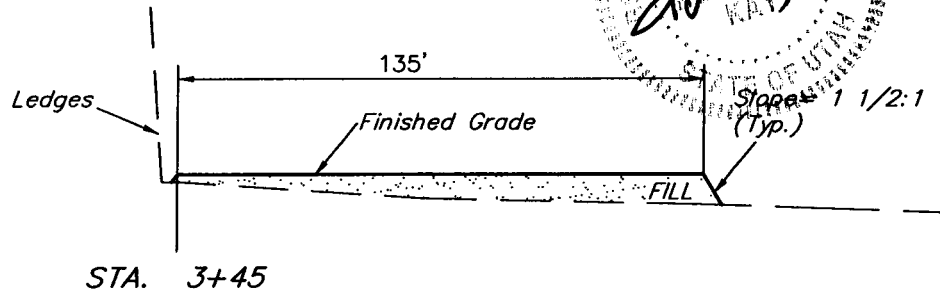
SECTION 36, T11S, R22E, S.L.B.&M.

494' FNL 482' FWL



1" = 20'
X-Section Scale
1" = 50'

DATE: 1-5-05
Drawn By: E.C.O.



* NOTE:
FILL QUANTITY INCLUDES
5% FOR COMPACTION

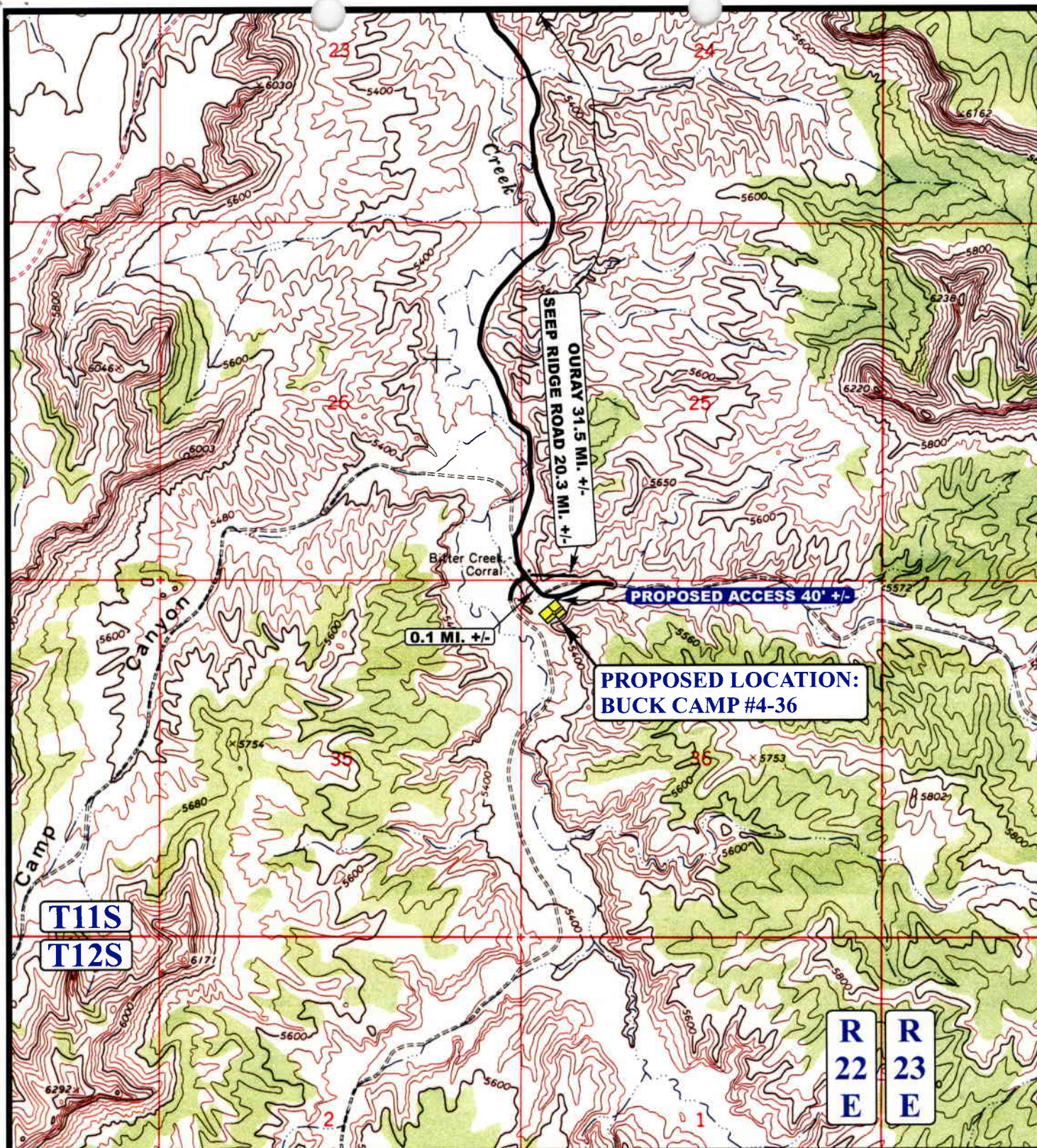
APPROXIMATE YARDAGES

CUT
(6") Topsoil Stripping = 1,460 Cu. Yds.
Remaining Location = 4,370 Cu. Yds.

TOTAL CUT = 5,830 CU.YDS.
FILL = 2,880 CU.YDS.

EXCESS MATERIAL = 2,950 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.) = 2,950 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation) = 0 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017



LEGEND:

EXISTING ROAD
 PROPOSED ACCESS ROAD



THE HOUSTON EXPLORATION COMPANY

BUCK CAMP #4-36
 SECTION 36, T11S, R22E, S.L.B.&M.
 494' FNL 482' FWL



Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC
 MAP

12 19 04
 MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: C.P. REVISED: 00-00-00



Statement of use of Hazardous Materials

No chemical(s) from the EPA's consolidated list of Chemicals subject to Reporting under Title III of the Superfund Amendments and Reauthorization, Act (SARA) of 1986 will be used, produced, transported, stored, disposed, or associated with the proposed action. No extremely hazardous substances, as defined in 40 cfr 355, will be used, produced, stored, transported, disposed, or associated with the proposed action.

If you require additional information please contact:

William A Ryan
Agent for The Houston Exploration Company
Rocky Mountain Consulting
290 S 800 E
Vernal, UT 84078

435-789-0968 Office
435-828-0968 Cell
435-789-0970 Fax

109°30.000' W

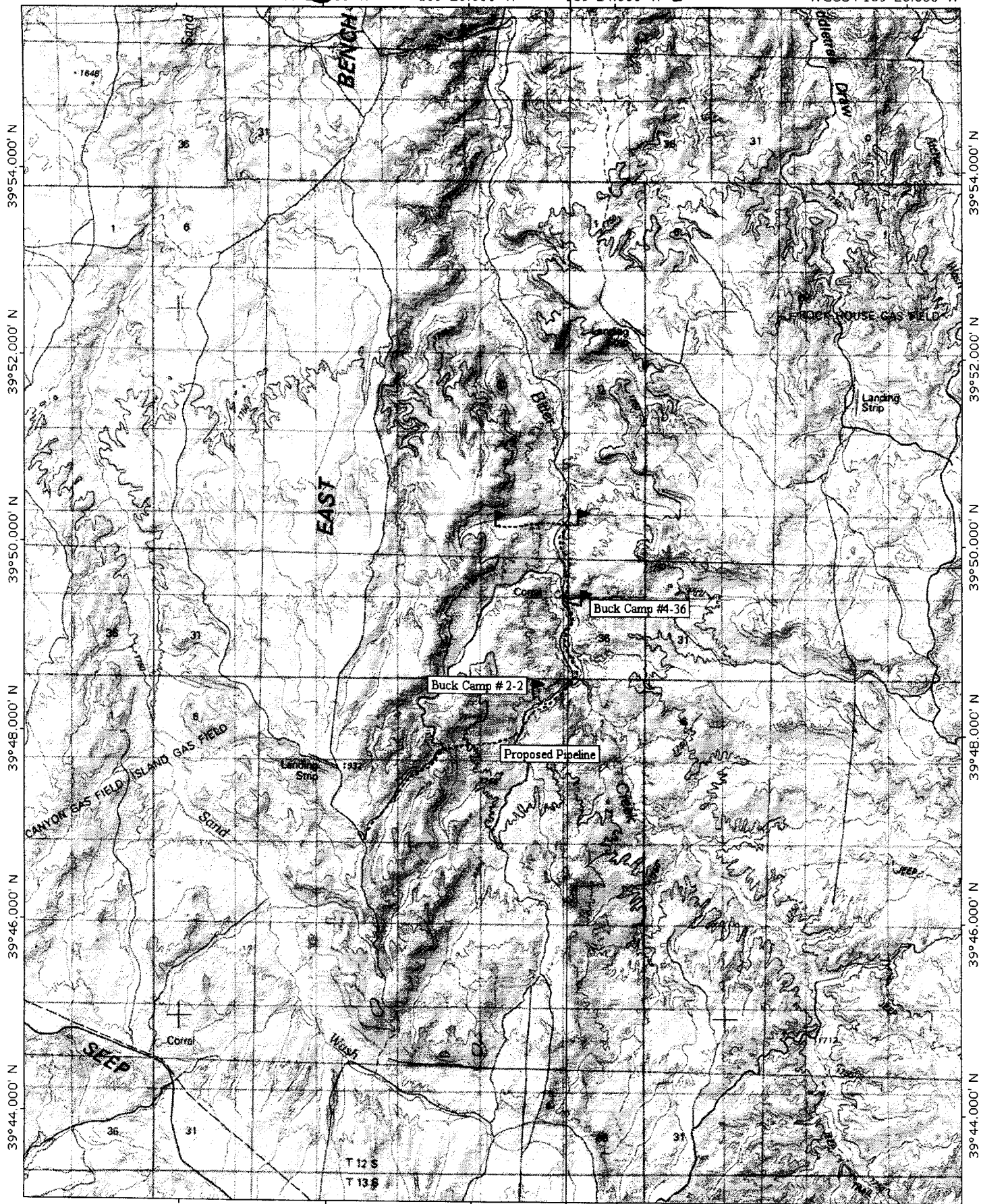
TOPQ printed on 01/31/05 from "UTAH topo" and "Unitt"

109°30.000' W

109°26.000' W

109°24.000' W

WGS84 109°20.000' W



109°30.000' W

109°28.000' W

109°26.000' W

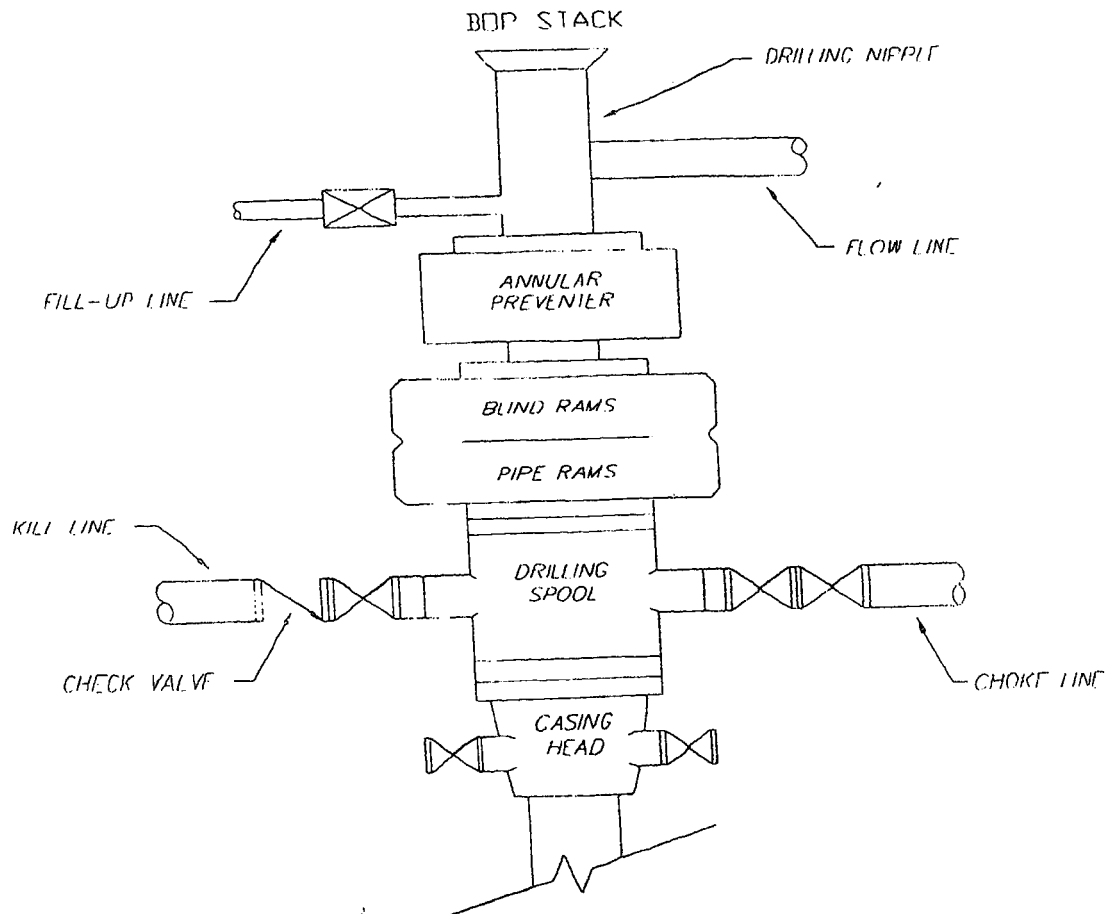
109°24.000' W

WGS84 109°20.000' W

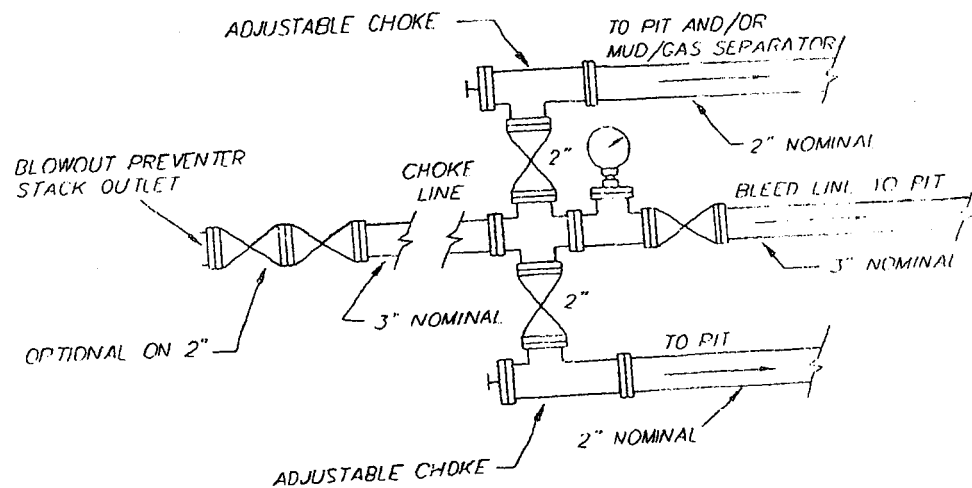
Map created with TOPO!® ©2002 National Geographic (www.nationalgeographic.com/topo)

THE HOUSTON EXPLORATION COMPANY

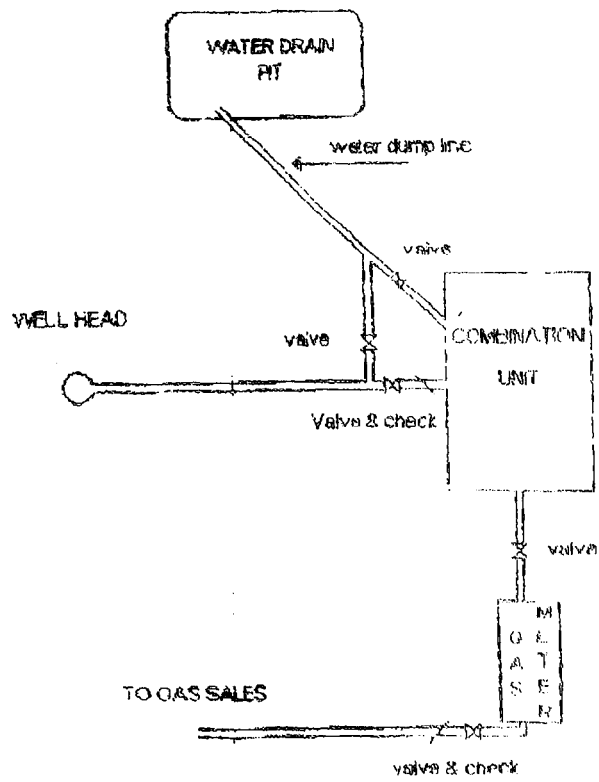
TYPICAL 3,000 p.s.i. BLOWOUT PREVENTER SCHEMATIC



TYPICAL 3,000 p.s.i. CHOKER MANIFOLD SCHEMATIC



TYPICAL
GAS WELL



003

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 02/02/2005

API NO. ASSIGNED: 43-047-36277

WELL NAME: BUCK CAMP 4-36

OPERATOR: HOUSTON EXPLORATION CO, (N2525)

CONTACT: BILL RYAN

PHONE NUMBER: 435-789-0968

PROPOSED LOCATION:

NWNW 36 110S 220E

SURFACE: 0494 FNL 0482 FWL

BOTTOM: 0494 FNL 0482 FWL

UINTAH

UNDESIGNATED (2)

LEASE TYPE: 3 - State

LEASE NUMBER: ML-47077

SURFACE OWNER: 3 - State

PROPOSED FORMATION: CSLGT

COALBED METHANE WELL? NO

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering	DKD	3/9/05
Geology		
Surface		

LATITUDE: 39.82299

LONGITUDE: -109.4105

RECEIVED AND/OR REVIEWED:

☒ Plat

☒ Bond: Fed[] Ind[] Sta[] Fee[]
 (No. 104155 044)

☒ Potash (Y/N)

☒ Oil Shale 190-5 (B) or 190-3 or 190-13

☒ Water Permit
 (No. T75377)

☒ RDCC Review (Y/N)
 (Date: _____)

☒ Fee Surf Agreement (Y/N)

LOCATION AND SITING:

____ R649-2-3.

Unit _____

____ R649-3-2. General
 Siting: 460 From Qtr/Qtr & 920' Between Wells

____ R649-3-3. Exception

____ Drilling Unit
 Board Cause No: _____
 Eff Date: _____
 Siting: _____

____ R649-3-11. Directional Drill

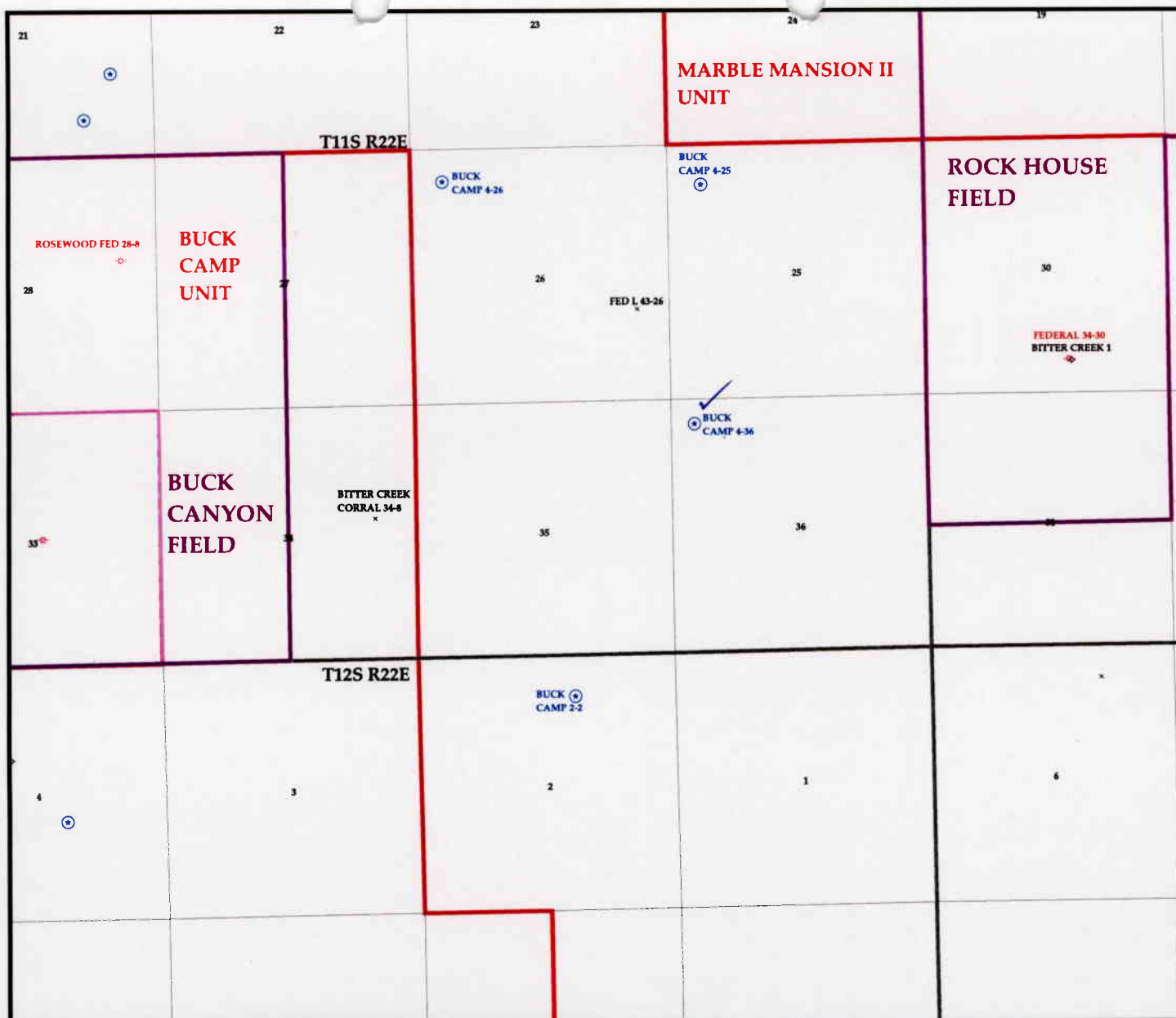
COMMENTS:

PRESHE (02-07-05)

STIPULATIONS:

1- Spacing Slip

2- STATEMENT OF BASIS



OPERATOR: THE HOUSTON EXPL CO (N2525)

SEC. 36 T.11S R.22E

FIELD: UNDESIGNATED (002)

COUNTY: UINTAH

SPACING: R649-3-2 / GENERAL SITING

Utah Oil Gas and Mining

Wells

- ⚡ GAS INJECTION
- ⚡ GAS STORAGE
- × LOCATION ABANDONED
- ⊕ NEW LOCATION
- ⊕ PLUGGED & ABANDONED
- ⚡ PRODUCING GAS
- PRODUCING OIL
- ⊕ SHUT-IN GAS
- ⊕ SHUT-IN OIL
- × TEMP. ABANDONED
- TEST WELL
- ⚡ WATER INJECTION
- ⚡ WATER SUPPLY
- ⚡ WATER DISPOSAL

Units.shp

- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields.shp

- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED



PREPARED BY: DIANA WHITNEY
DATE: 3-FEBRUARY-2005

ON-SITE PREDRILL EVALUATION
Division of Oil, Gas and Mining

OPERATOR: THE HOUSTON EXPLORATION COMPANY
WELL NAME & NUMBER: BUCK CAMP 4-36
API NUMBER: 43-047-36277
LEASE: ML-47077 FIELD/UNIT: UNDESIGNATED
LOCATION: 1/4, 1/4 NW/NW sec: 36 TWP: 11S RNG: 22E 482' FWL 494' FNL
LEGAL WELL SITING: 460 F SEC. LINE; 460 F 1/4, 1/4 LINE; 920 F ANOTHER WELL.
GPS COORD (UTM): 636031E 4409115N SURFACE OWNER: STATE OF UTAH

PARTICIPANTS

DAVID W. HACKFORD (DOGM), GINGER STRINGHAM (HOUSTON), ONE DIRT CONTRACTOR, FLOYD BARTLETT (DWR).

REGIONAL/LOCAL SETTING & TOPOGRAPHY

SITE IS IN THE BOTTOM OF BITTER CREEK CANYON IN AN AREA THAT IS RELATIVELY FLAT AND LEVEL. AT THIS POINT, BITTER CREEK IS AN INTERMITTANT STREAM, AND THE WATER COURSE IS 600' TO THE WEST. A SIDE CANYON ENTERS BITTER CREEK FROM THE EAST, AND THE DRY WATER COURSE IN THE BOTTOM OF THIS CANYON IS 300' NORTH OF THIS SITE. BITTER CREEK RUNS TO THE NORTH AND ENTERS THE WHITE RIVER 12 MILES AWAY. VERNAL, UTAH IS 62.2 MILES TO THE NORTH. THE CANYON WALLS TO THE EAST AND WEST ARE STEEP AND RUGGED WITH SHEER FACES, SPIRES AND SHARP SLOPES.

SURFACE USE PLAN

CURRENT SURFACE USE: WILDLIFE AND LIVESTOCK GRAZING, HUNTING.

PROPOSED SURFACE DISTURBANCE: LOCATION WILL BE 345' BY 235'. ACCESS ROAD WILL BE 40 FEET.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: SEE ATTACHED MAP FROM GIS DATABASE.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: ALL PRODUCTION FACILITIES WILL BE ON LOCATION AND ADDED AFTER DRILLING WELL. PIPELINE WILL FOLLOW ACCESS ROAD.

SOURCE OF CONSTRUCTION MATERIAL: ALL CONSTRUCTION MATERIAL WILL BE BORROWED FROM SITE DURING CONSTRUCTION OF LOCATION.

ANCILLARY FACILITIES: NONE WILL BE REQUIRED.

WILL DRILLING AT THIS LOCATION GENERATE PUBLIC INTEREST OR CONCERNS?
EXPLAIN: UNLIKELY.

WASTE MANAGEMENT PLAN:

DRILLED CUTTINGS WILL BE SETTLED INTO RESERVE PIT. LIQUIDS FROM PIT WILL BE ALLOWED TO EVAPORATE. FORMATION WATER WILL BE CONFINED TO STORAGE TANKS. SEWAGE FACILITIES, STORAGE AND DISPOSAL WILL BE HANDLED BY COMMERCIAL CONTRACTOR. TRASH WILL BE CONTAINED IN TRASH BASKETS AND HAULED TO AN APPROVED LAND FILL.

ENVIRONMENTAL PARAMETERS

AFFECTED FLOODPLAINS AND/OR WETLANDS: NONE

FLORA/FAUNA: SAGE, HORSEBRUSH, GREASEWOOD, PRICKLY PEAR, SHADSCALE, RUSSIAN THISTLE: PRONGHORN, RODENTS, SONGBIRDS, RAPTORS, COYOTE, RABBITS, +

SOIL TYPE AND CHARACTERISTICS: LIGHT BROWN SANDY CLAY.

EROSION/SEDIMENTATION/STABILITY: VERY LITTLE NATURAL EROSION. SEDIMENTATION AND STABILITY ARE NOT A PROBLEM AND LOCATION CONSTRUCTION SHOULDN'T CAUSE AN INCREASE IN STABILITY OR EROSION PROBLEMS.

PALEONTOLOGICAL POTENTIAL: NONE OBSERVED

RESERVE PIT

CHARACTERISTICS: 175' BY 60' AND 12' DEEP.

LINER REQUIREMENTS (Site Ranking Form attached): A LINER WILL NOT BE REQUIRED FOR RESERVE PIT.

SURFACE RESTORATION/RECLAMATION PLAN

AS PER SITLA.

SURFACE AGREEMENT: AS PER SITLA.

CULTURAL RESOURCES/ARCHAEOLOGY: SITE WILL BE INSPECTED BY SAGEBRUSH ARCHEOLOGICAL CONSULTANTS. A REPORT OF THIS INVESTIGATION WILL BE PLACED ON FILE.

OTHER OBSERVATIONS/COMMENTS

THIS PREDRILL INVESTIGATION WAS CONDUCTED ON A COOL, CLOUDY DAY WITH PARTIAL SNOW COVER.

ATTACHMENTS

PHOTOS OF SITE WILL BE TAKEN AND PLACED ON FILE.

DAVID W. HACKFORD
DOGM REPRESENTATIVE

2/07/2005 11:00 AM
DATE/TIME

**Evaluation Ranking Criteria and Ranking Score
For Reserve and Onsite Pit Liner Requirements**

<u>Site-Specific Factors</u>	<u>Ranking</u>	<u>Site Ranking</u>
Distance to Groundwater (feet)		
>200	0	
100 to 200	5	
75 to 100	10	
25 to 75	15	
<25 or recharge area	20	<u>0</u>
Distance to Surf. Water (feet)		
>1000	0	
300 to 1000	2	
200 to 300	10	
100 to 200	15	
< 100	20	<u>0</u>
Distance to Nearest Municipal Well (feet)		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	20	<u>0</u>
Distance to Other Wells (feet)		
>1320	0	
300 to 1320	10	
<300	20	<u>0</u>
Native Soil Type		
Low permeability	0	
Mod. permeability	10	
High permeability	20	<u>10</u>
Fluid Type		
Air/mist	0	
Fresh Water	5	
TDS >5000 and <10000	10	
TDS >10000 or Oil Base Mud Fluid	15	
containing significant levels of hazardous constituents	20	<u>5</u>
Drill Cuttings		
Normal Rock	0	
Salt or detrimental	10	<u>0</u>
Annual Precipitation (inches)		
<10	0	
10 to 20	5	
>20	10	<u>0</u>
Affected Populations		
<10	0	
10 to 30	6	
30 to 50	8	
>50	10	<u>0</u>
Presence of Nearby Utility		
Conduits		
Not Present	0	
Unknown	10	
Present	15	<u>0</u>

Final Score 15 (Level II Sensitivity)

Sensitivity Level I = 20 or more: total containment is required.

Sensitivity Level II = 15-19: lining is discretionary.

Sensitivity Level III = below 15: no specific lining is required.

**DIVISION OF OIL, GAS AND MINING
APPLICATION FOR PERMIT TO DRILL
STATEMENT OF BASIS**

OPERATOR: THE HOUSTON EXPLORATION COMPANY
WELL NAME & NUMBER: BUCK CAMP 4-36
API NUMBER: 43-047-36277
LOCATION: 1/4, 1/4 NW/NW Sec: 36 TWP: 11S RNG: 22E 482' FWL 494' FNL

Geology/Ground Water:

The Houston Ex. Co. proposes to set 2,000 feet of surface casing cemented to the surface. The base of the moderately saline water is estimated at 2,400 feet. A search of Division of Water Rights records shows 3 water wells within a 10,000 foot radius of the proposed location. These wells are approximately 1 mile south of the proposed location and may be up to 1,500 feet deep. The surface formation at this location is the Green River Formation. The Green River Formation is made up of sands interbedded with shales and limestones. This can be considered a recharge area for the Green River Formation and should be protected. The proposed surface casing should adequately protect the recharge area and potentially useable aquifers.

Reviewer: Brad Hill **Date:** 02-08-05

Surface:

The predrill investigation of the surface was performed on 02/07/05. Floyd Bartlett with DWR and Ed Bonner with SITLA were invited to this investigation on 02/03/05. Mr. Bartlett was present. He had no concerns regarding the construction of this location or the drilling of this well. This site is on State surface, with State minerals, and appears to be the best site for a location in the immediate area. Mr. Bartlett presented Ms. Stringham a DWR prescribed seed mix to be used when reserve pit is reclaimed.. An 18" culvert will be necessary where access road enters location. A diversion ditch will be constructed around the north side of the location.

Reviewer: David W. Hackford **Date:** 02/09/2005

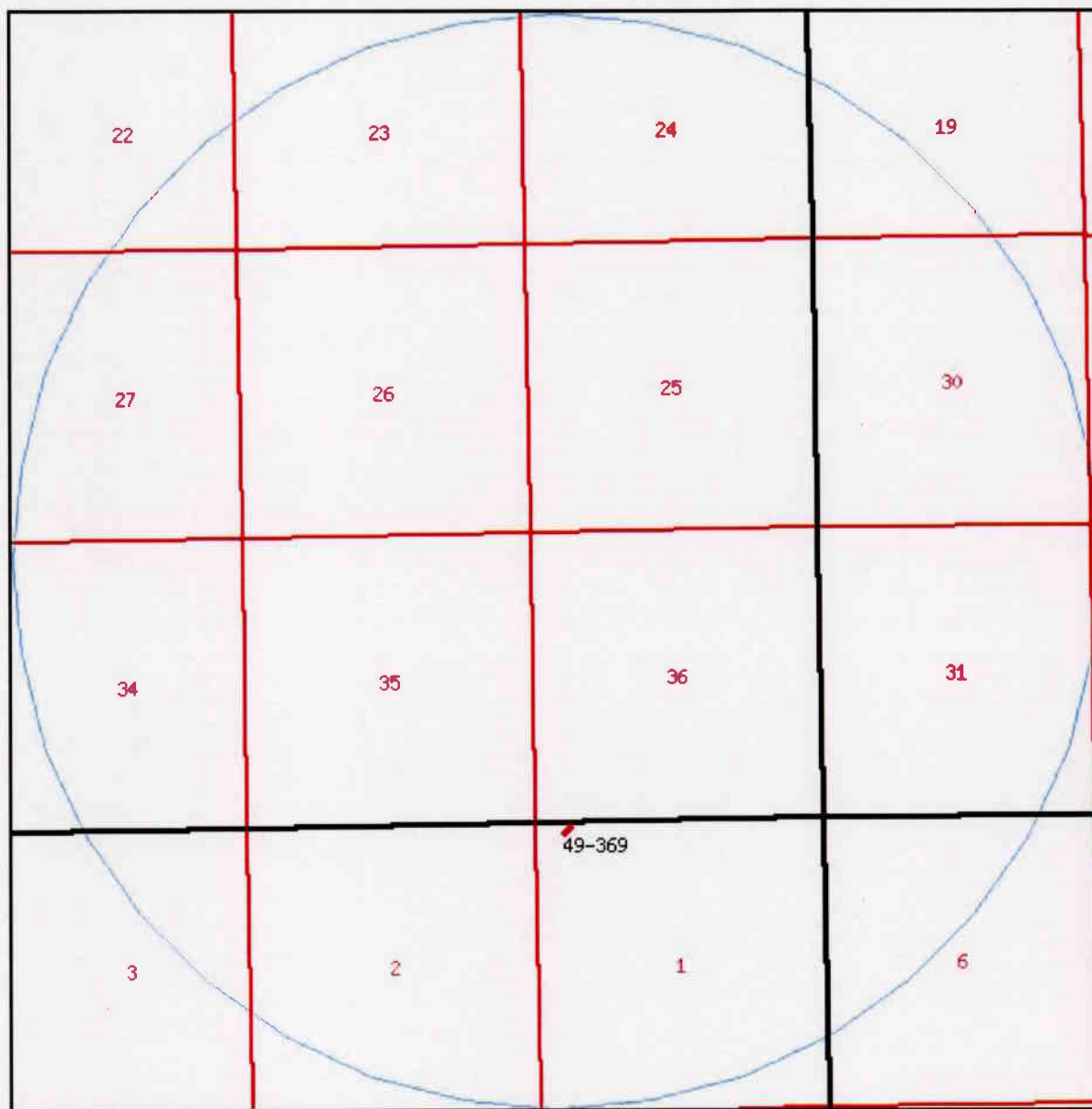
Conditions of Approval/Application for Permit to Drill:

None.

WRPLAT Program Output Listing

Version: 2004.12.30.00 Rundate: 02/09/2005 01:15 PM

Radius search of 10000 feet from a point S494 E482 from the NW corner, section 36, Township 11S, Range 22E, SL b&m
Criteria:wrtypes=W,C,E podtypes=U status=U,A,P usetypes=all



0 1300 2600 3900 5200 ft

Water Rights

WR Number	Diversion Type/Location	Well Log	Status	Priority	Uses	CFS	ACFT	Owner Name
49-1620	Underground S112 E617 NW 01 12S 22E SL		A	19981023	O	0.000	22.000	ROSEWOOD RESOURCES INC C/O IVAN SADLIER
49-351	Underground S95 E625 NW 01 12S 22E SL		A	19780503	S	0.022	0.000	UTAH SCHOOL AND INSTITUTIONAL TRUST LANDS ADMIN. 675 EAST 500 SOUTH, 5TH FLOOR
49-369	Underground S190 E540 NW 01 12S 22E SL		A	19800627	S	0.100	0.000	VERNAL DISTRICT USA BUREAU OF LAND MANAGEMENT 170 SOUTH 500 EAST

[Natural Resources](#) | [Contact](#) | [Disclaimer](#) | [Privacy Policy](#) | [Accessibility Policy](#)

Well name:

03-05 Houston Buck Camp 4-36Operator: **The Houston Exploration Company**String type: **Surface**

Project ID:

43-047-36277Location: **Uintah County****Design parameters:****Collapse**

Mud weight: 8.400 ppg

Design is based on evacuated pipe.

Minimum design factors:**Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No

Surface temperature: 65 °F

Bottom hole temperature: 93 °F

Temperature gradient: 1.40 °F/100ft

Minimum section length: 250 ft

Cement top: Surface

Burst

Max anticipated surface pressure:

1,760 psi

Internal gradient: 0.120 psi/ft

Calculated BHP 2,000 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)

8 Round LTC: 1.80 (J)

Buttress: 1.60 (J)

Premium: 1.50 (J)

Body yield: 1.50 (B)

Non-directional string.

Tension is based on buoyed weight.

Neutral point: 1,749 ft

Re subsequent strings:

Next setting depth: 8,000 ft

Next mud weight: 10.000 ppg

Next setting BHP: 4,156 psi

Fracture mud wt: 19.250 ppg

Fracture depth: 2,000 ft

Injection pressure 2,000 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2000	8.625	36.00	J-55	ST&C	2000	2000	7.7	143.5
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	873	3450	3.954	2000	4460	2.23	63	434	6.89 J

Prepared by: Clinton Dworshak
Utah Div. of Oil & MiningPhone: 801-538-5280
FAX: 810-359-3940Date: March 2, 2005
Salt Lake City, Utah**Remarks:**

Collapse is based on a vertical depth of 2000 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:

03-05 Houston Buck Camp 4-36Operator: **The Houston Exploration Company**String type: **Production**

Project ID:

43-047-36277Location: **Uintah County****Design parameters:****Collapse**Mud weight: 10.000 ppg
Design is based on evacuated pipe.**Minimum design factors:****Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 177 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 4,188 ft

BurstMax anticipated surface pressure: 3,196 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 4,156 psi

No backup mud specified.

Tension:8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Non-directional string.

Tension is based on buoyed weight.

Neutral point: 6,804 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	8000	4.5	11.60	N-80	LT&C	8000	8000	3.875	185.4
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	4156	6350	1.528	4156	7780	1.87	79	223	2.83 J

Prepared by: Clinton Dworshak
Utah Div. of Oil & MiningPhone: 801-538-5280
FAX: 810-359-3940Date: March 2, 2005
Salt Lake City, Utah**Remarks:**

Collapse is based on a vertical depth of 8000 ft, a mud weight of 10 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

03-05 Houston Buck Camp 436

Casing Schematic

Green River

Surface

8-5/8"
MW 8.4
Frac 19.3

TOC @
0.

1230 TOC Tail

w/ 18% Washout

Surface
2000. MD

2400 BMSW

Strip
Top of Cement
± 2400' TO
protect BMSW

4080 Wasatch

TOC @
4188.

5260 TOC Tail

w/ 15% Washout

TOC 2363' w/ 10% Washout

5747 Mesavende

✓ Propose 2500' or
higher

Production
8000. MD

4-1/2"
MW 10.

BHP

$$(.052)(10)(8000) = 4160$$

Anticipate 3,000 MAP

Geo

$$(.12)(8,000) = 960$$

$$MASP = 3200$$

fluid

$$(.22)(8,000) = 1760$$

$$MASP = 2400$$

BOP - 3,000 ✓

Surf csg - 4460

$$70\% = 3122$$

(10,000) Max Shoe pressure 2840

H₂O grad Max Shoe pressure 2174

Test To 2800# ✓

✓ Adequate D&D 3/9/05

From: Ed Bonner
To: Whitney, Diana
Date: 4/21/2005 2:34:20 PM
Subject: Well Clearance

The following wells have been given cultural resource clearance by the Trust Lands Cultural Resources Group:

The Houston Exploration Company

- Buck Camp 2-2
- Buck Camp 4-36 ✓
- Hanging Rock 1-32
- Hanging Rock 16-32
- Rockhouse 3-32-10-23
- Rockhouse 7-32-10-23
- Rockhouse 9-32-10-23
- Rock House 4-32
- Rock House 5-32
- Rock House 13-32
- Rock House 1-36-10-22
- Rock House 3-36-10-22
- Rock House 7-36-10-22
- Rock House 12-36-10-22

If you have any questions regarding this matter please give me a call.

CC: Garrison, LaVonne; ginger_stringham@yahoo.com; Hill, Brad; Hunt, Gil

**State of Utah****Department of
Natural Resources**

MICHAEL R. STYLER
Executive Director

**Division of
Oil, Gas & Mining**

MARY ANN WRIGHT
Acting Division Director

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

April 21, 2005

The Houston Exploration Company
1100 Louisiana, Suite 2000
Houston, Texas 77002

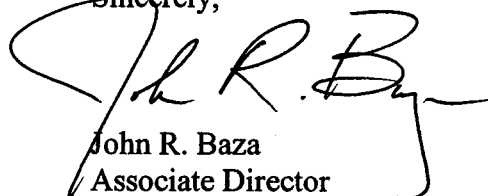
Re: Buck Camp 4-36 Well, 494' FNL, 482' FWL, NW NW, Sec. 36, T. 11 South,
R. 22 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-36277.

Sincerely,



John R. Baza
Associate Director

jc
Enclosures

cc: Uintah County Assessor
SITLA

Operator: The Houston Exploration Company
Well Name & Number Buck Camp 4-36
API Number: 43-047-36277
Lease: ML-47077

Location: NW NW **Sec.** 36 **T.** 11 South **R.** 22 East

Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- 24 hours prior to cementing or testing casing
- 24 hours prior to testing blowout prevention equipment
- 24 hours prior to spudding the well
- within 24 hours of any emergency changes made to the approved drilling program
- prior to commencing operations to plug and abandon the well

The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. Compliance with the State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.

5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

6. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

CONFIDENTIAL

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: THE HOUSTON EXPLORATION COMPANY

Well Name: BUCK CAMP 4-36

Api No: 43-047-36277 Lease Type: STATE

Section 36 Township 11S Range 22E County UINTAH

Drilling Contractor PETE MARTIN RIG # BUCKET

SPUDDED:

Date 08/30/05

Time 10:00 AM

How DRY

Drilling will Commence: _____

Reported by BRENT STUBBS

Telephone # 1-435-828-8100

Date 09/01/2005 Signed CHD

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: The Houston Exploration CompanyOperator Account Number: N 2525Address: 1100 Louisiana, Suite 2000city Houstonstate TXzip 77002Phone Number: (713) 830-6800

Well 1

43-047-36277	Buck Camp 4-36	WWW	36	115	22E	Uintah
A	99999	14912	8/30/05	9/8/05		
Comments: <u>CSLGT = MVRD</u>		CONFIDENTIAL				

Well 2

Comments:						

Well 3

Comments:						

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Theresa Overturf

Name (Please Print)

Signature

Engineering Technician

Title

Date

9-8-05
RECEIVED
SEP 08 2005

DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL

OIL WELL ☐

GAS WELL ☒

OTHER ☐

2. NAME OF OPERATOR:

Enduring Resources, LLC

3. ADDRESS OF OPERATOR:

475 17th Street, Suite 1500

CITY Denver

STATE CO

ZIP 80202

PHONE NUMBER:

(303) 350-5114

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 494' FNL - 482' FWL

S.L.B. & M.

COUNTY: Uintah

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 36 11S 22E

STATE:

UTAH

5. LEASE DESIGNATION AND SERIAL NUMBER:

ML-47077

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

N/A

7. UNIT or CA AGREEMENT NAME:

N/A

8. WELL NAME and NUMBER:

Buck Camp 4-36

9. API NUMBER:

4304736277

10. FIELD AND POOL, OR WILDCAT:

Wildcat

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Spud, Set Conductor</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<u>and Surface Casing</u>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Surface Hole spudded @ 0900 hrs (MST) 09-03-2005

MIRU Pete Martin Rathole Drig Inc. Drl 80' of 20" hole. Run 80' of 14" line pipe for connductor. Cmt in place w/ 6 yards of Readymix concrete. Cmt to surface.

MIRU Bill Jr.'s Rathole Drig Rig. Dril 12-1/4' hole to 2,030'. Ran 43 jts 8-5/8' 24# & 32# J-55 8rd ST&C surf csg to 1979. Cmt guide shoe, 1 jt 8-5/8', FC & jts 8-5/8' to surf. Used 8 centralizers.

MIRU Big 4 Cementers, Run 200' of 1" down annulus. Pump 100 bbls fresh water, 20 bbls gel water, (Lead) 160 sx premium cement, 16% gel, 1/4# sx Flowcele, 23 gal/sx mix water, 3.5cuft/sx yield, 11.1#/gal., 235 bbls of slurry, (Tail) 170 sxs premium 2% cacl2 1/4# Flowcele/sx, 5 gal/sx mix water, 15.8#/gal, 1.15 cuft/sx yield, 36 bbls of slurry. Cement circulated to surface. Top cemented w/ 100 sxs premium 3% cacl2. (data same as tail). Second Top, 50 sxs premium 3% cacl2 (Held at Surface).

Change of Operator from The Houston Exploration Company to Enduring Resources, LLC pending approval.

Utah State Bond #RLB0008031

Operator No. N2750

NAME (PLEASE PRINT) Alvin R. (Al) Arlian

TITLE Landman - Regulatory Specialist

SIGNATURE 

DATE 9/17/2005

(This space for State use only)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9


SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47077
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <u>CONFIDENTIAL</u>		7. UNIT or CA AGREEMENT NAME: N/A
2. NAME OF OPERATOR: Enduring Resources, LLC		8. WELL NAME and NUMBER: Buck Camp 4-36
3. ADDRESS OF OPERATOR: 475 17th Street, Suite 1500 CITY Denver STATE CO ZIP 80202		9. API NUMBER: 4304736277
4. LOCATION OF WELL FOOTAGES AT SURFACE: 494' FNL - 482' FWL S.L.B. & M. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 36 11S 22E		10. FIELD AND POOL, OR WILDCAT: Wildcat
		COUNTY: Uintah STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/RESUME) <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input checked="" type="checkbox"/> OTHER: <u>MIRU</u>
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: <u>9/19/2005</u>			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

09/17/2005, start moving in and rigging up True Drilling Rig #27.

Utah State Bond #RLB0008031
Operator No. N2750

NAME (PLEASE PRINT) <u>Alvin R. (Al) Arlian</u>	TITLE <u>Landman - Regulatory Specialist</u>
SIGNATURE 	DATE <u>9/19/2005</u>

(This space for State use only)

6c. Reports current for Production/Disposition & Sundries on:

9/29/2005

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM not yet BIA n/a

8. **Federal and Indian Units:**

The BLM or BIA has approved the successor of unit operator for wells listed on: _____ not yet

9. **Federal and Indian Communization Agreements ("CA"):**

The BLM or BIA has approved the operator for all wells listed within a CA on: n/a

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: n/a

DATA ENTRY:

1. Changes entered in the Oil and Gas Database on: _____

2. Changes have been entered on the Monthly Operator Change Spread Sheet on: _____

3. Bond information entered in RBDMS on: _____

4. Fee/State wells attached to bond in RBDMS on: _____

5. Injection Projects to new operator in RBDMS on: n/a

6. Receipt of Acceptance of Drilling Procedures for APD/New on: _____

FEDERAL WELL(S) BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: UTB000173

INDIAN WELL(S) BOND VERIFICATION:

1. Indian well(s) covered by Bond Number: n/a

FEE & STATE WELL(S) BOND VERIFICATION:

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number RLB0008031

2. The **FORMER** operator has requested a release of liability from their bond on: n/a
The Division sent response by letter on: _____

LEASE INTEREST OWNER NOTIFICATION:

3. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

COMMENTS:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47077
2. NAME OF OPERATOR: The Houston Exploration Company N2525		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 11001 Louisiana Ste 2000 Houston STATE TX ZIP 77002		7. UNIT or CA AGREEMENT NAME: N/A
PHONE NUMBER: (713) 830-6938		8. WELL NAME and NUMBER: Buck Camp 4-36
10. FIELD AND POOL, OR WILDCAT: Wildcat		

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 494' FNL - 482' FWL S.L.B. & M. COUNTY: Uintah
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 36 11S 22E STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____ <input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 9/19/2005	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input checked="" type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION (START/RESUME) <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUT-OFF <input type="checkbox"/> OTHER: _____

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Effective: 10-11-2005

Enduring Resources, LLC N2750
475 17th Street, Suite 1500
Denver, Colorado 80202

Operator No. N 2750
Utah State Bond #RLB0008031

Contact: Frank Hutto 303-350-5102

ENDURING RESOURCES, LLC


BY: Frank Hutto, Vice President - Operations

DATE: 10-21-05

NAME (PLEASE PRINT) Joanne Hresko	TITLE Vice President and General Manager - Onshore
SIGNATURE 	DATE 10/12/2005

(This space for State use only)

APPROVED 10/31/2005

Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

RECEIVED

OCT 26 2005

DIV. OF OIL, GAS & MINING

ENDURING RESOURCES, LLC

425 Seventeenth Street, Suite 1500

Denver, Colorado 80202

Telephone: 303-573-1222

Facsimile: 303-573-0461

October 26, 2005

State of Utah
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801

*T 115 R 22E S-36
43-047-36277*

**RE: Well Logs
Uintah County, Utah**

Ladies and Gentlemen:

Attached are two original copies of digital and hard copies of logs for the following wells.

- 4-36*
1. Buck Camp ~~4-85~~
 2. Buck Camp 2-2
 3. Rockhopper Federal 29-11
 4. Hanging Rock 16-32

Enduring respectfully requests that you hold this information confidential as long as permitted.

Should you have any questions concerning this matter, please do not hesitate to call 303-350-5114 (aarlian@enduringresources.com).

Very truly yours

ENDURING RESOURCES, LLC



Alvin R. (Al) Arlian
Land – Regulatory Specialist

ara/
Enclosures as stated:

RECEIVED

OCT 27 2005

DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47077
2. NAME OF OPERATOR: Enduring Resources, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 475 17th Stree, Suite 1500 CITY Denver STATE CO ZIP 80202		7. UNIT or CA AGREEMENT NAME:
4. LOCATION OF WELL FOOTAGES AT SURFACE: 494' FNL & 482' FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 36 11S 22E S		8. WELL NAME and NUMBER: Buck Camp 4-36
PHONE NUMBER: (303) 573-1222		9. API NUMBER: 4304736277
COUNTY: Uintah STATE: UTAH		10. FIELD AND POOL, OR WILDCAT:

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Change well name</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<u>and number</u>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

CHANGE WELL NAME AND NUMBER:

FROM: Buck Camp 4-36
TO: Buck Camp 11-22-11-36

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY

NAME (PLEASE PRINT) <u>Alvin R. (AI) Arlian</u>	TITLE <u>Landman - Regulatory Specialist</u>
SIGNATURE <u>[Signature]</u>	DATE <u>11/10/2005</u>

(This space for State use only)

NOV 14 2005
DIV OF OIL, GAS AND MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.


1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47077
2. NAME OF OPERATOR: Enduring Resources, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 475 17th Street, Suite 1500 CITY Denver STATE CO ZIP 80202		7. UNIT or CA AGREEMENT NAME: N/A
4. LOCATION OF WELL FOOTAGES AT SURFACE: 494' FNL - 482' FWL S.L.B. & M. COUNTY: Uintah		8. WELL NAME and NUMBER: Buck Camp 11-22-11-36
5. PHONE NUMBER: (303) 350-5114		9. API NUMBER: 4304736277
6. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 36 11S 22E		10. FIELD AND POOL, OR WILDCAT: Wildcat
7. STATE: UTAH		

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 12/1/2005	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Production Casing Report</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

10-1-2005 TIH, to 6744' PU 5 Jts. DP, W&R 6744' - 6914' No fill. C&C to run Prod. Csg. RU T & M Casers LD Machine. Mix Pill Pump pill, & LDDP, Break Kelly, LD DCS Pull Wear Bushing. RU T&M Casers, PU & run 162 Jts. Of 4 1/2", 11.6#, M-80, LTC as follows. 1- 505A Davis Lynch self filling Float shoe 1.25', 1- Shoe Jt., 42.48', 1- 705A Davis Lynch Self filling Float Collar, 1.25'. 51 Jts @ 2161.78', 1- 701-DOC (Depth Orientation Collar), @ 4671.28' 2.0', 49 Jts. Of Csg, 2072.39', 1- 701-DOC (Depth orientation Collar) @ 2596.85', 2.0', 61 Jts. Of Csg., 2599.97', & 1- Landing Jt. @ 16.36', W/ 3.12' of stick up. RU DS, & Circ W/ Rig Pump, Change over & pump 40 bbl of fresh water, Followed by 75 Sx of "G" W/ 12% D020, 5% D044, 1% D079, .2% D046, .25% D112, & .25 PPS D029 mixed @ 11 PPG, yield 3.98, 53 bbl of Slurry, Tail in W/ 1219.46 Sx of 50/50 Poz "G" W/ 2% D020, .1% D46, .2% D065, .2% D167, & 1% S001, mixed @ 14.1 PPG, yield 1.29, 280 BBL of Slurry. Drop plug & Displace W/ 106 BBL of water W/ 2% KCL Substitute & Biocide. Bumped Plug @ 02:12 W/ PSI, 2500, 1000 PSI over. Released, floats held ok. Good Circ. through the complete job. RD DS. ND BOPE, Clean Mud tanks, RD gas Buster & Flare Lines, Release Rig @ 07:00 10/02/05. Waiting on Completion Rig.

NAME (PLEASE PRINT) <u>Alvin R. (Al) Arlian</u>	TITLE <u>Landman - Regulatory Specialist</u>
SIGNATURE 	DATE <u>12/1/2005</u>

(This space for State use only)

CONFIDENTIAL

DEC 05 2005

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <u>CONFIDENTIAL</u>		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47077
2. NAME OF OPERATOR: Enduring Resources, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 475 17th Street, Suite 1500 CITY Denver STATE CO ZIP 80202		7. UNIT or CA AGREEMENT NAME: N/A
PHONE NUMBER: (303) 350-5114		8. WELL NAME and NUMBER: Buck Camp 11-22-11-36
4. LOCATION OF WELL FOOTAGES AT SURFACE: 494' FNL - 482' FWL S.L.B.& M.		9. API NUMBER: 4304736277
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 36 11S 22E		10. FIELD AND POOL, OR WILDCAT: Wildcat
COUNTY: Uintah		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 3/31/2006	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input checked="" type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>First Sales Report</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The subject well had first sales on March 29, 2006. It sold 581 MCF in 16 hr with 880# FCP. It also made an estimated 411 BW. This well is still recovering load fluid.

Completion report to follow.

NAME (PLEASE PRINT) <u>Alvin R. (Al) Arlian</u>	TITLE <u>Landman - Regulatory Specialist</u>
SIGNATURE 	DATE <u>3/31/2006</u>

(This space for State use only)

RECEIVED
APR 03 2006
DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐
(highlight changes)

FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47077
b. TYPE OF WORK: NEW WELL <input checked="" type="checkbox"/> HORIZ. LATS. <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
2. NAME OF OPERATOR: Enduring Resources, LLC		7. UNIT OR CA AGREEMENT NAME N/A
3. ADDRESS OF OPERATOR: 475 17th St, Suite 1500 CITY Denver STATE Co ZIP 80202		8. WELL NAME and NUMBER: Buck Camp 11-22-11-36
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 494' FNL - 482' FWL AT TOP PRODUCING INTERVAL REPORTED BELOW: 494' FNL - 482' FWL AT TOTAL DEPTH: 494' FNL - 482' FWL		9. API NUMBER: 4304736277
10. FIELD AND POOL, OR WILDCAT Wildcat		11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 36 11S 22E
12. COUNTY Utah		13. STATE UTAH

14. DATE SPUDDED: 9/23/2005	15. DATE T.D. REACHED: 9/30/2005	16. DATE COMPLETED: 3/25/2006	ABANDONED <input type="checkbox"/> READY TO PRODUCE <input checked="" type="checkbox"/>	17. ELEVATIONS (DF, RKB, RT, GL): 5394 RKB
18. TOTAL DEPTH: MD 6,914 TVD 6,914	19. PLUG BACK T.D.: MD 6,855 TVD 6,855	20. IF MULTIPLE COMPLETIONS, HOW MANY? * 6	21. DEPTH BRIDGE MD PLUG SET: TVD	
22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) Previously Submitted			23. WAS WELL CORED? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit analysis) WAS DST RUN? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit report) DIRECTIONAL SURVEY? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit copy)	

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14"	Line Pipe	0	40		3 yards		0	0
12-1/4"	8-5/8 J-55	32#	0	1,991		CL G 480	166	0	0
7-7/8"	4-1/2 M-80	11.6#	0	6,899		CL G 1,295	355	2035 (CBL)	0

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

26. PRODUCING INTERVALS <i>WSMVD</i>					27. PERFORATION RECORD				
FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS	
(A) Wasatch	4,550	4,563			4,562 4,563	1'slot	1	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(B) Mesaverde	5,463	6,548			5,463 6,548	1'slot	5	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
4562' - 4563'	47,549 lbs 20/40 Ottawa Sand in the Wasatch Formation
5463' - 6548'	241,937 lbs 20/40 Ottawa Sand in the Mesaverde Formation

29. ENCLOSED ATTACHMENTS: <input type="checkbox"/> ELECTRICAL/MECHANICAL LOGS <input type="checkbox"/> SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION <input type="checkbox"/> GEOLOGIC REPORT <input type="checkbox"/> CORE ANALYSIS <input type="checkbox"/> DST REPORT <input type="checkbox"/> OTHER: _____ <input type="checkbox"/> DIRECTIONAL SURVEY	30. WELL STATUS: Producing
--	-----------------------------------

MAY 10 2006

CONFIDENTIAL

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 3/29/2006		TEST DATE: 4/29/2006		HOURS TESTED: 720		TEST PRODUCTION RATES: →		OIL – BBL: 1		GAS – MCF: 444		WATER – BBL: 14		PROD. METHOD: 30 Day Ave.	
CHOKE SIZE: 22	TBG. PRESS.	CSG. PRESS. 750	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →		OIL – BBL:		GAS – MCF:		WATER – BBL:		INTERVAL STATUS: Producing	

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
Wasatch	2,839				
Mesaverde	4,770				
Buck Tongue	6,808				

35. ADDITIONAL REMARKS (Include plugging procedure)

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) Christian Veillette TITLE Engineer
 SIGNATURE  DATE 5/5/2006

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
 1594 West North Temple, Suite 1210
 Box 145801
 Salt Lake City, Utah 84114-5801

Phone: 801-538-5340
 Fax: 801-359-3940



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

999 18th STREET - SUITE 300

DENVER, CO 80202-2466

<http://www.epa.gov/region08>

DEC 08 2006

Ref: 8P-W-GW

RECEIVED

DEC 14 2006

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

DIV. OF OIL, GAS & MINING

Alex Campbell
Enduring Resources, LLC
475 17th Street Suite 1500
Denver, CO 80202

43.047.36277
11S 22E 36

Re: Underground Injection Control Program
Permit for the Buck Camp 11-22-11-36 WD Well
Uintah County, UT
EPA Permit No. UT21062-07150

Dear Mr. Campbell:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Permit for the proposed Buck Camp 11-22-11-36 WD injection well. A Statement of Basis, which discusses development of the conditions and requirements of the Permit, also is included.

The Public Comment period ended on DEC 2 2006. There were no comments on the Draft Permit received during the Public Notice period, and therefore the Final Permit becomes effective on the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect on the date that this Permit becomes effective.

Please note that under the terms of the Final Permit, you are authorized only to construct the proposed injection well, and must fulfill the "Prior to Commencing Injection" requirements of the Permit, Part II Section C Subpart 1 and obtain written Authorization to Inject prior to commencing injection. It is your responsibility to be familiar with and to comply with all provisions of the Final Permit.

The Permit and the authorization to inject are issued for the operating life of the well unless terminated (Part III, Section B). The EPA will review this Permit at least every five (5) years to determine whether action under 40 CFR § 144.36(a) is warranted.

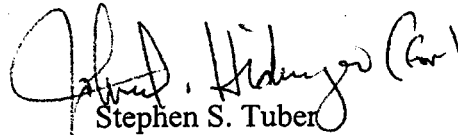
**Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY**



Printed on Recycled Paper

If you have any questions on the enclosed Final Permit or Statement of Basis, please call Patricia Pfeiffer of my staff at (303) 312-6271, or toll-free at (800) 227-8917, ext. 6271.

Sincerely,



Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

enclosure: Final UIC Permit
Statement of Basis
Form 7520-7 Application to Transfer Permit
Form 7520-11 Monitoring Report
Form 7520-14 Plugging Plan
Form 7520-12 Well Rework Record
Groundwater Section Guidance 34
Groundwater Section Guidance 35
Groundwater Section Guidance 37
Groundwater Section Guidance 39

cc: Maxine Natchees, Acting Chairperson
Uintah & Ouray Business Committee
Ute Indian Tribe
P.O. Box 190
Fort Duchesne, UT 84026

Chester Mills, Superintendent
BIA - Uintah & Ouray Indian Agency
P.O. Box 130
Fort Duchesne, UT 84026

Mr. Jack Watson
Senior Geologist
Enduring Resources
475 Seventeenth Street, Suite 1500
Denver, CO 80202

FOR RECORD
JAN 10 2001
BUREAU OF LAND MANAGEMENT
U.S. DEPARTMENT OF THE INTERIOR



Printed on Recycled Paper

Shaun Chapoose
Director of Land Use Department
Ute Indian Tribe
P.O. Box 460
Fort Duchesne, UT 84026

Brad Hill ✓
Technical Services Manager
Utah Division of Oil, Gas, and Mining
1594 West North Temple - Suite 1220
Salt Lake City, UT 84114-5801

Fluid Minerals Engineering Office
BLM - Vernal Office
170 South 500 East
Vernal, UT 84078

Lynn Becker, Director
Energy and Minerals Department
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, UT 84026



STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47077
2. NAME OF OPERATOR: Enduring Resources, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 475 17th Street, Suite 1500 CITY Denver STATE CO ZIP 80202		7. UNIT or CA AGREEMENT NAME: N/A
4. LOCATION OF WELL FOOTAGES AT SURFACE: 494' FNL - 482' FWL S.L.B.& M. COUNTY: Uintah		8. WELL NAME and NUMBER: Buck Camp 11-22-11-36
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 36 11S 22E		9. API NUMBER: 4304736277
		10. FIELD AND POOL, OR WILDCAT: Wildcat
		STATE: UTAH


11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 4/20/2007	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input checked="" type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

In order to prevent waste of gas, as defined by law; to protect the correlative rights of all parties concerned; to prevent the drilling of un-necessary wells; and to insure proper and efficient development and promote conservation of the gas resources of the State of Utah, Enduring Resources, LLC respectfully request approval to perforate and commingle the Wasatch and Mesaverde formations "pools" in the same well bore.

- Ownership in both formations is the same. However, in the event allocation of production is necessary, that allocation will be based on proportionate net pay based on well logs.
- These formations shall be commingled in the well bore and produced concurrently in a single string of 2-3/8" production tubing.
- Attached is a map showing the location of wells on contiguous oil and gas leases and/or production units.
- Also attached is an affidavit confirming that this application has been provided to leasehold interest owners in contiguous oil and gas lease or production units overlying the "pool."

COPY SENT TO OPERATOR
Date: 5/22/07
Initials: CRO

NAME (PLEASE PRINT) Alvin R. (Al) Arlian TITLE Landman - Regulatory Specialist
SIGNATURE  DATE 4/20/2007

(This space for State use only)

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

DATE: 5/17/07 (See Instructions on Reverse Side)

BY: 

RECEIVED

APR 24 2007

DIV. OF OIL, GAS & MINING

ENDURING RESOURCES, LLC

425 Seventeenth Street, Suite 1500

Denver, Colorado 80202

Telephone: 303-573-1222

Facsimile: 303-573-0461

October 20, 2005

The Houston Exploration Company
1100 Louisiana, Suite 2000
Houston, Texas 77002

CERTIFIED MAIL

ARTICLE NO: 7006 2760 0002 2926 3509

Attention: Land Department

**RE: Commingling Application
Buck Camp 11-22-11-36
494' FNL – 482' FWL (NWNW) Section 36, T11S-R22E
Uintah County, Utah**

Dear Leasehold Interest Owner:

Enduring Resources, LLC ("Enduring") has filed an application with the State of Utah Division of Oil, Gas, and Mining requesting approval of the Wasatch and Mesaverde formations (pools) in the above-referenced well to be commingled.

Ownership in both formations is the same. However, in the event allocation of production is necessary, that allocation will be based on proportionate net pay based on well logs. These formations (pools) shall be commingled in the well's well bore.

Attached is a map showing the location of wells on contiguous oil and gas leases and/or production units. Also attached is an affidavit confirming that this application has been provided to leasehold interest owners in contiguous oil and gas leases or production units overlying the commingled pools (commingled formations).

Should you have any questions concerning this matter, please do not hesitate to call (303-350-5114)

Very truly yours

ENDURING RESOURCES, LLC



Alvin R. (Al) Arlian
Landman – Regulatory Specialist

ara/

Attachments as stated:

AFFIDAVIT OF MAILING

Statue of Colorado)
City and)ss.
County of Denver)

Alvin R. Arlian (hereinafter sometimes referred to as "Affiant"), of lawful age, being first duly sworn upon oath, deposes and says:

1. Affiant is a Landman-Regulatory Specialist for Enduring Resources, LLC (hereinafter sometimes referred to as "Enduring") whose address is 475 17th Street, Denver, Colorado 80202,

2. Enduring is the operator of the following described oil and gas well:

**Buck Camp 11-22-11-36
494' FNL – 482' FWL (NWNW) Section 36, T11S-R22E
Uintah County, Utah**

3. A cursory search of applicable records confirmed that the following parties are the only leasehold interest owners in the contiguous oil and gas wells, contiguous oil and gas leases, or contiguous oil and gas well production units overlying the "pool."

1. The Houston Exploration Company
- 2.
- 3.
- 4.

4. On Friday, April 20, 2007 Affiant mailed (or caused to be mailed) in U.S. Mail, with postage prepaid, a copy of the attached Application for Commingling two or more pools (formations) in one well bore of the well described in Paragraph No. 2 above which said Application for Commingling (Form 9) has/had concurrently been filed with the State of Utah Division of Oil, Gas, and Mining (and if applicable, copies sent to SITLA, and the Bureau of Land Management), and

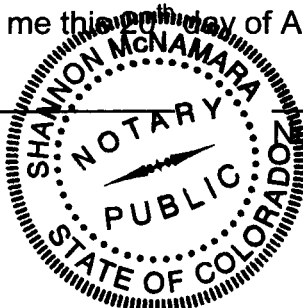
5. Attached is a map showing the location of wells' located on contiguous oil and gas leases and/or production units.

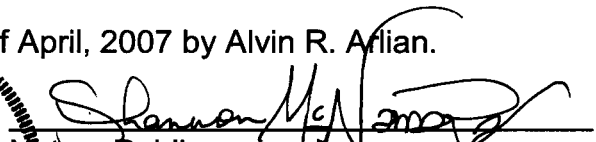
Affiant saith no more.


Alvin R. Arlian, Affiant

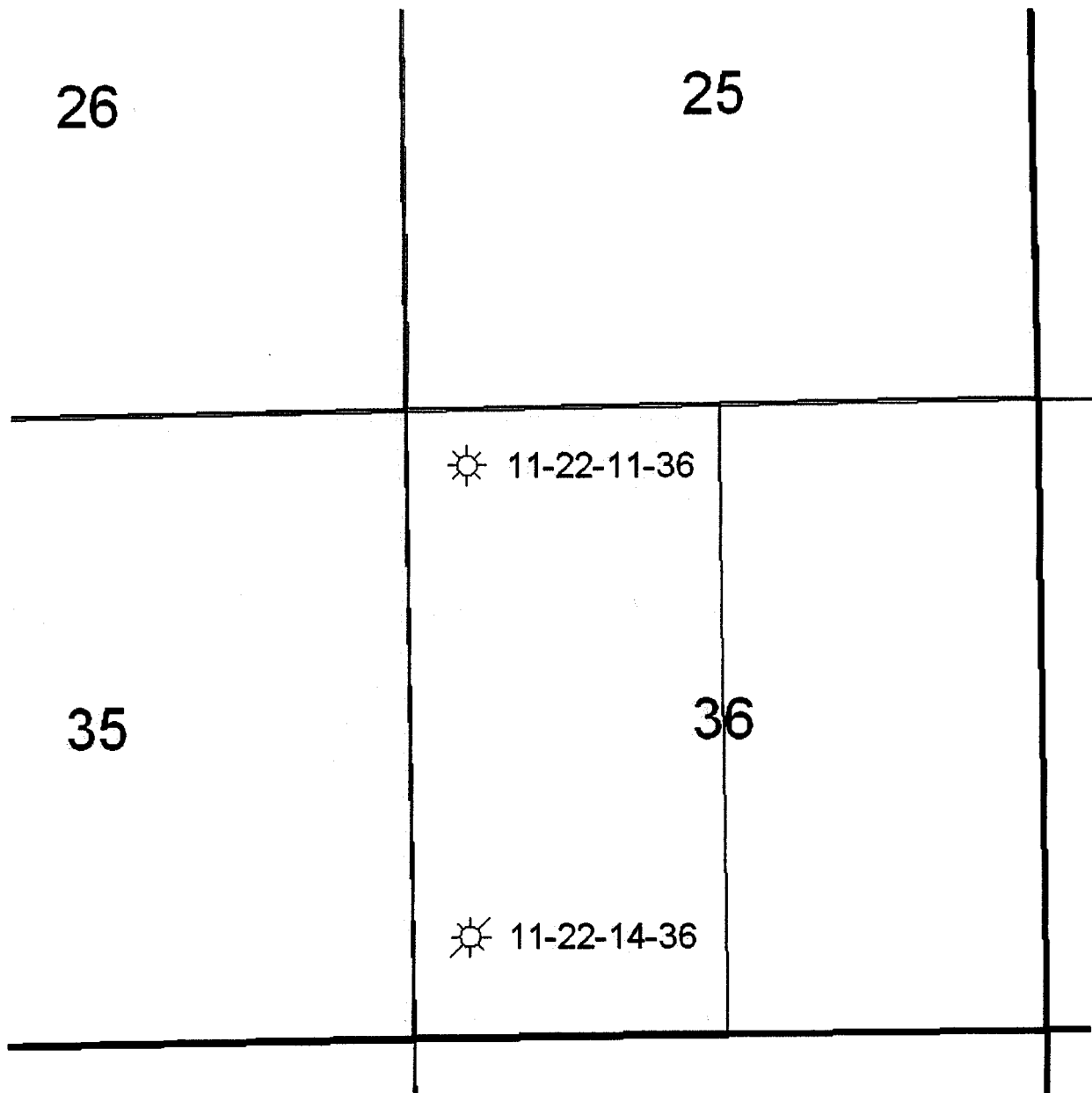
Scribed and sworn to before me this 20th day of April, 2007 by Alvin R. Arlian.

5/16/2009
My Commission Expires:




Notary Public.

MAP ATTACHED TO ENDURING RESOURCES, LLC COMMINGLING
APPLICATION FOR BUCK CAMP 11-22-11-36 LOCATED IN THE NWNW OF
SECTION 36, T11S-R22E



STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47077
2. NAME OF OPERATOR: Enduring Resources, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 475 17th Street, Suite 1500 CITY Denver STATE CO ZIP 80202		7. UNIT or CA AGREEMENT NAME: N/A
4. LOCATION OF WELL FOOTAGES AT SURFACE: 494' FNL - 482' FWL S.L.B. & M.		8. WELL NAME and NUMBER: Buck Camp 11-22-11-36
PHONE NUMBER: (303) 350-5114		9. API NUMBER: 4304736277
10. FIELD AND POOL, OR WILDCAT: Wildcat		
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON	
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE	
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 4/20/2007	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF	
	<input checked="" type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____	
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION		

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

In order to prevent waste of gas, as defined by law; to protect the correlative rights of all parties concerned; to prevent the drilling of un-necessary wells; and to insure proper and efficient development and promote conservation of the gas resources of the State of Utah, Enduring Resources, LLC respectfully request approval to perforate and commingle the Wasatch and Mesaverde formations "pools" in the same well bore.

1. Ownership in both formations is the same. However, in the event allocation of production is necessary, that allocation will be based on proportionate net pay based on well logs.
2. These formations shall be commingled in the well bore and produced concurrently in a single string of 2-3/8" production tubing.
3. Attached is a map showing the location of wells on contiguous oil and gas leases and/or production units.
4. Also attached is an affidavit confirming that this application has been provided to leasehold interest owners in contiguous oil and gas lease or production units overlying the "pool."

COPY SENT TO OPERATOR
DATE: 6-29-07
BY: RM



NAME (PLEASE PRINT) Alvin R. (AI) Arlian TITLE Landman - Regulatory Specialist
SIGNATURE _____ DATE 4/23/2007

(This space for State use only)

**APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING**
DATE: 6/26/07
BY: [Signature]

(See Instructions on Reverse Side)

**RECEIVED
APR 26 2007**

DIV. OF OIL, GAS & MINING

Al Arlian

From: Dustin Doucet [dustindoucet@utah.gov]
Sent: Friday, May 18, 2007 1:11 PM
To: Al Arlian
Subject: Commingling Applications

Al,

There were several recent applications for commingling that I received that did not have any attachments (the plat, affidavit etc.). I am thinking these correspond all to wells that have already been commingled without the approval and this may be the reason the attachments were not submitted. I do need the attachments in order to approve the commingling. Following is the list of API #'s for wells I have a Sundry but no attachments:

4304736277
4304736788
4304735902
4304736308
4304736235
4304737489
4304736424
4304735861
4304736407

I don't believe I have approved these previous and don't think I have any more documentation in the office. Let me know if I am off base on this. Otherwise please submit the requested information. Give me a call if you have questions. Thanks.

Dustin

Dustin K. Doucet
Petroleum Engineer
Utah Division of Oil, Gas and Mining
Oil and Gas Program
1594 West North Temple, Suite 1210
Salt Lake City, UT 84116

Phone: (801) 538-5281
fax: (801) 359-3940
email: dustindoucet@utah.gov

RECEIVED
MAY 24 2007
DIV. OF OIL, GAS & MINING

ENDURING RESOURCES, LLC

425 Seventeenth Street, Suite 1500

Denver, Colorado 80202

Telephone: 303-573-1222

Facsimile: 303-573-0461

April 23, 2007

The Houston Exploration Company
1100 Louisiana, Suite 2000
Houston, Texas 77002

CERTIFIED MAIL

ARTICILE NO: 7006 2760 0002 2878 4623

Attention: Land Department

**RE: Commingling Application
Buck Camp 11-22-11-36
494' FNL – 482' FWL (NWNW) Section 36, T11S-R22E
Uintah County, Utah**

Dear Leasehold Interest Owner:

Enduring Resources, LLC ("Enduring") has filed an application with the State of Utah Division of Oil, Gas, and Mining requesting approval of the Wasatch and Mesaverde formations (pools) in the above-referenced well to be commingled.

Ownership in both formations is the same. However, in the event allocation of production is necessary, that allocation will be based on proportionate net pay based on well logs. These formations (pools) shall be commingled in the well's well bore.

Attached is a map showing the location of wells on contiguous oil and gas leases and/or production units. Also attached is an affidavit confirming that this application has been provided to leasehold interest owners in contiguous oil and gas leases or production units overlying the commingled pools (commingled formations).

Should you have any questions concerning this matter, please do not hesitate to call (303-350-5114)

Very truly yours

ENDURING RESOURCES, LLC



Alvin R. (Al) Arlian
Landman – Regulatory Specialist

ara/

Attachments as stated:

AFFIDAVIT OF MAILING

Statue of Colorado)
City and)ss.
County of Denver)

Alvin R. Arlian (hereinafter sometimes referred to as "Affiant"), of lawful age, being first duly sworn upon oath, deposes and says:

1. Affiant is a Landman-Regulatory Specialist for Enduring Resources, LLC (hereinafter sometimes referred to as "Enduring") whose address is 475 17th Street, Denver, Colorado 80202,

2. Enduring is the operator of the following described oil and gas well:

**Buck Camp 11-22-11-36
494' FNL – 482' FWL (NWNW) Section 36, T11S-R22E
Uintah County, Utah**

3. A cursory search of applicable records confirmed that the following parties are the only leasehold interest owners in the contiguous oil and gas wells, contiguous oil and gas leases, or contiguous oil and gas well production units overlying the "pool."

1. The Houston Exploration Company
- 2.
- 3.
- 4.

4. On Monday, April 23, 2007 Affiant mailed (or caused to be mailed) in U.S. Mail, with postage prepaid, a copy of the attached Application for Commingling two or more pools (formations) in one well bore of the well described in Paragraph No. 2 above which said Application for Commingling (Form 9) has/had concurrently been filed with the State of Utah Division of Oil, Gas, and Mining (and if applicable, copies sent to SITLA, and the Bureau of Land Management), and

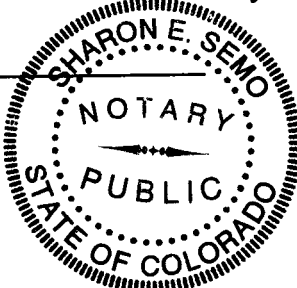
5. Attached is a map showing the location of wells' located on contiguous oil and gas leases and/or production units.

Affiant saith no more.


Alvin R. Arlian, Affiant

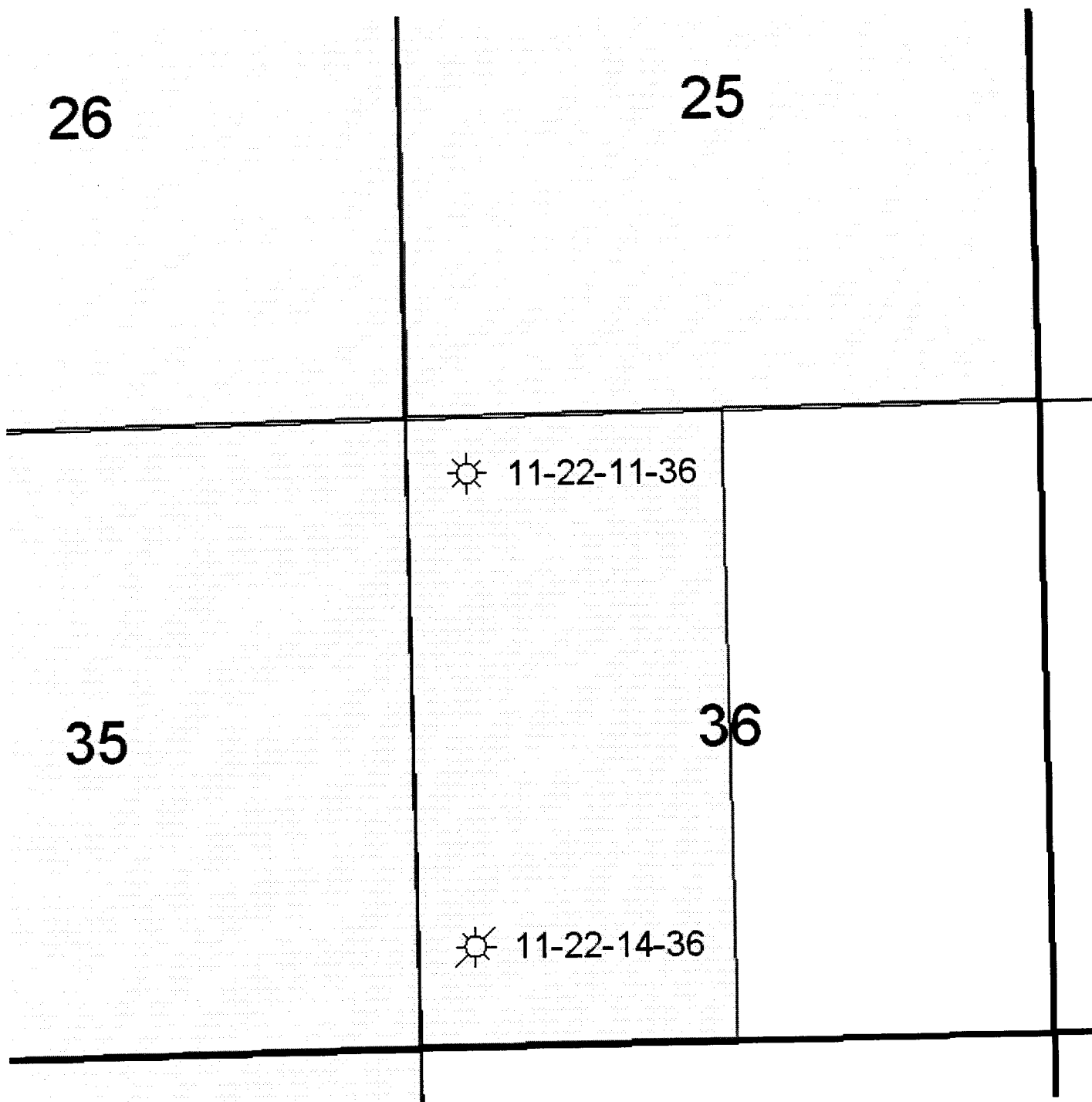
Scribed and sworn to before me this 20th day of April, 2007 by Alvin R. Arlian.

9/23/2009
My Commission Expires:



Sharon E. Semo
Notary Public.

MAP ATTACHED TO ENDURING RESOURCES, LLC COMMINGLING
APPLICATION FOR BUCK CAMP 11-22-11-36 LOCATED IN THE NWNW OF
SECTION 36, T11S-R22E





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8
1595 WYNKOOP STREET
DENVER, CO 80202-1129
<http://www.epa.gov/region8>

OCT 1 2007

Ref: 8P-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Alex Campbell
Enduring Resources, LLC
475 17th Street Suite 1500
Denver, CO 80202

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY

43-047-36277

Re: FINAL UIC Permit
EPA UIC Permit UT21062-07150
Well: Buck Camp 11-22-11-36 WD
Uintah County, UT

RECEIVED

OCT 22 2007

Dear Mr. Campbell:

DIV. OF OIL, GAS & MINING

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Permit for the proposed Buck Camp 11-22-14-36 WD injection well. A Statement of Basis that discusses the conditions and requirements of this EPA UIC Permit, is also included.

SEP 21 2007

The Public Comment period for this Permit ended on _____. No comments on the Draft Permit were received during the Public Notice period; therefore the Effective Date for this EPA UIC Permit is the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect as of the Effective Date of this Permit.

Please note that under the terms and conditions of this Final Permit you are authorized only to construct the proposed injection well. Prior to commencing injection, you first must fulfill all "Prior to Commencing Injection" requirements of the Final Permit, Part II Section C Subpart 1, and obtain written Authorization to Inject from the EPA. It is your responsibility to be familiar with and to comply with all provisions of your Final Permit.

This EPA UIC Permit is issued for the operating life of the well unless terminated (Part III, Section B). The EPA may review this Permit at least every five (5) years to determine whether any action is warranted pursuant to 40 CFR § 144.36(a).



Printed on Recycled Paper

If you have any questions on the enclosed Final Permit or Statement of Basis, please call Patricia Pfeiffer of my staff at (303) 312-6271, or toll-free at (800) 227-8917, ext. 312-6271.

Sincerely,

[Handwritten signature: Stephen S. Tuber]

for Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

enclosure: Final UIC Permit
 Statement of Basis
 Form 7520-7 Application to Transfer Permit
 Form 7520-11 Monitoring Report
 Form 7520-14 Plugging Plan
 Form 7520-12 Well Rework Record
 Groundwater Section Guidance 34
 Groundwater Section Guidance 35
 Groundwater Section Guidance 37
 Groundwater Section Guidance 39

cc: Curtis Cesspooch, Chairperson
 Uintah & Ouray Business Committee
 Ute Indian Tribe

Ronald Groves, Councilman
Uintah & Ouray Business Committee
Ute Indian Tribe

Irene Cuch, Vice-Chairperson
Uintah & Ouray Business Committee
Ute Indian Tribe

Steven Cesspooch, Councilman
Uintah & Ouray Business Committee
Ute Indian Tribe

Phillip Chimbraus, Councilman
Uintah & Ouray Business Committee
Ute Indian Tribe

Francis Poowegup, Councilman
Uintah & Ouray Business Committee
Ute Indian Tribe

Chester Mills, Superintendent
BIA - Uintah & Ouray Indian Agency

Shawn Chapoose, Director
Land Use Department
Ute Indian Tribe

Gil Hunt
Technical Services Manager
Utah Division of Oil, Gas, and Mining

Fluid Minerals Engineering Office
BLM - Vernal Office

Lynn Becker, Director
Energy and Minerals Department
Ute Indian Tribe





**UNDERGROUND INJECTION CONTROL PROGRAM
PERMIT**

PREPARED: September 2007

Permit No. UT21062-07150

Class II Salt Water Disposal Well

**Buck Camp 11-22-14-36 WD
Uintah County, UT**

Issued To

Enduring Resources LLC

475 17th Street, Suite 1500

Denver, CO 80202

PART I. AUTHORIZATION TO CONSTRUCT AND OPERATE	2
PART II. SPECIFIC PERMIT CONDITIONS	3
Section A. WELL CONSTRUCTION REQUIREMENTS	3
1. Casing and Cement.	3
2. Injection Tubing and Packer.	3
3. Sampling and Monitoring Devices.	3
4. Well Logging and Testing	4
5. Postponement of Construction or Conversion	4
6. Workovers and Alterations	4
Section B. MECHANICAL INTEGRITY	4
1. Demonstration of Mechanical Integrity (MI).	5
2. Mechanical Integrity Test Methods and Criteria	5
3. Notification Prior to Testing.	5
4. Loss of Mechanical Integrity.	5
Section C. WELL OPERATION	6
1. Requirements Prior to Commencing Injection.	6
2. Injection Interval.	6
3. Injection Pressure Limitation	6
4. Injection Volume Limitation.	7
5. Injection Fluid Limitation.	7
6. Tubing-Casing Annulus (TCA)	7
Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS	7
1. Monitoring Parameters, Frequency, Records and Reports.	7
2. Monitoring Methods.	8
3. Records Retention.	8
4. Annual Reports.	8
Section E. PLUGGING AND ABANDONMENT	9
1. Notification of Well Abandonment, Conversion or Closure.	9
2. Well Plugging Requirements	9
3. Approved Plugging and Abandonment Plan.	9
4. Forty Five (45) Day Notice of Plugging and Abandonment.	9
5. Plugging and Abandonment Report.	9
6. Inactive Wells.	10

PART III. CONDITIONS APPLICABLE TO ALL PERMITS	11
Section A. EFFECT OF PERMIT	11
Section B. CHANGES TO PERMIT CONDITIONS	11
1. Modification, Reissuance, or Termination.	11
2. Conversions.	11
3. Transfer of Permit.	11
4. Permittee Change of Address.	12
5. Construction Changes, Workovers, Logging and Testing Data	12
Section C. SEVERABILITY	12
Section D. CONFIDENTIALITY	12
Section E. GENERAL PERMIT REQUIREMENTS	12
1. Duty to Comply.	13
2. Duty to Reapply.	13
3. Need to Halt or Reduce Activity Not a Defense.	13
4. Duty to Mitigate.	13
5. Proper Operation and Maintenance.	13
6. Permit Actions.	13
7. Property Rights.	13
8. Duty to Provide Information.	13
9. Inspection and Entry.	13
10. Signatory Requirements.	14
11. Reporting Requirements.	14
Section F. FINANCIAL RESPONSIBILITY	15
1. Method of Providing Financial Responsibility.	15
2. Insolvency.	15
APPENDIX A - WELL CONSTRUCTION REQUIREMENTS	A-1
APPENDIX B - LOGGING AND TESTING REQUIREMENTS	B-1
APPENDIX C - OPERATING REQUIREMENTS	C-1
APPENDIX D - MONITORING AND REPORTING REQUIREMENTS	D-1
APPENDIX E - PLUGGING AND ABANDONMENT REQUIREMENTS	E-1

Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE

Under the authority of the Safe Drinking Water Act and Underground Injection Control (UIC) Program regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 2, 124, 144, 146, and 147, and according to the terms of this Permit,

Enduring Resources LLC
475 17th Street, Suite 1500
Denver, CO 80202

is authorized to construct and to operate the following Class II injection well or wells:

Buck Camp 11-22-14-36 WD
851' FSL 475' FWL, SWSW S36, T11S, R22E
Uintah County, UT

EPA regulates the injection of fluids into injection wells so that injection does not endanger underground sources of drinking water (USDWs). EPA UIC Permit conditions are based on authorities set forth at 40 CFR Parts 144 and 146, and address potential impacts to USDWs.

Under 40 CFR Part 144, Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General permit conditions for which the content is mandatory and not subject to site-specific differences are not discussed in this document. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize injury to persons or property or invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. (40 CFR §144.35) An EPA UIC Permit may be issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR §§144.39, 144.40 and 144.41, and may be reviewed at least once every five (5) years to determine if action is required under 40 CFR §144.36(a).

This Permit is issued for the life of the well(s) unless modified, revoked and reissued, or terminated under 40 CFR 144.39 or 144.40. This EPA Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for a UIC Program is delegated to an Indian Tribe or State. Upon the effective date of delegation, reports, notifications, questions and other correspondence should be directed to the Indian Tribe or State Director.

Issue Date: OCT 5 2007

Effective Date OCT 5 2007



for Stephen S. Tuber
Assistant Regional Administrator*
Office of Partnerships and Regulatory Assistance

*NOTE: The person holding this title is referred to as the "Director" throughout this Permit.

PART II. SPECIFIC PERMIT CONDITIONS

Section A. WELL CONSTRUCTION REQUIREMENTS

These requirements represent the approved minimum construction standards for well casing and cement, injection tubing, and packer.

Details of the approved well construction plan are incorporated into this Permit as APPENDIX A. Changes to the approved plan that may occur during construction must be approved by the Director prior to being physically incorporated.

1. Casing and Cement.

The well or wells shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The well casing and cement shall be designed for the life expectancy of the well and of the grade and size shown in APPENDIX A. Remedial cementing may be required if shown to be inadequate by cement bond log or other attempted demonstration of Part II (External) mechanical integrity.

2. Injection Tubing and Packer.

Injection tubing is required, and shall be run and set with a packer at or below the depth indicated in APPENDIX A. The packer setting depth may be changed provided it remains below the depth indicated in APPENDIX A and the Permittee provides notice and obtains the Director's approval for the change.

3. Sampling and Monitoring Devices.

The Permittee shall install and maintain in good operating condition:

- (a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and
- (b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:
 - (i) on the injection tubing; and
 - (ii) on the tubing-casing annulus (TCA); and
- (c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure (MAIP) specified in APPENDIX C is reached at the wellhead; and
- (d) a non-resettable cumulative volume recorder attached to the injection line.

4. Well Logging and Testing

Well logging and testing requirements are found in APPENDIX B. The Permittee shall ensure the log and test requirements are performed within the time frames specified in APPENDIX B. Well logs and tests shall be performed according to current EPA-approved procedures. Well log and test results shall be submitted to the Director within sixty (60) days of completion of the logging or testing activity, and shall include a report describing the methods used during logging or testing and an interpretation of the test or log results.

The latest version of the "EPA Region 6 UIC Pressure Falloff Testing Guideline" shall be used as a guideline for designing the required Pressure Falloff Test. This guideline often refers to hazardous waste wells and regulatory terms associated with them, but the pressure falloff test design, test methods, and test interpretation guidelines are all very appropriate to Class II wells.

5. Postponement of Construction or Conversion

The Permittee shall complete well construction within one year of the Effective Date of the Permit, or in the case of an Area Permit within one year of Authorization of the additional well. Authorization to construct and operate shall expire if the well has not been constructed within one year of the Effective Date of the Permit or Authorization and the Permit may be terminated under 40 CFR 144.40, unless the Permittee has notified the Director and requested an extension prior to expiration. Notification shall be in writing, and shall state the reasons for the delay and provide an estimated completion date. Once Authorization has expired under this part, the complete permit process including opportunity for public comment may be required before Authorization to construct and operate may be reissued.

6. Workovers and Alterations

Workovers and alterations shall meet all conditions of the Permit. Prior to beginning any addition or physical alteration to an injection well that may significantly affect the tubing, packer or casing, the Permittee shall give advance notice to the Director and obtain the Director's approval. The Permittee shall record all changes to well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workover, logging, or test data to EPA within sixty (60) days of completion of the activity.

A successful demonstration of Part I MI is required following the completion of any well workover or alteration which affects the casing, tubing, or packer. Injection operations shall not be resumed until the well has successfully demonstrated mechanical integrity and the Director has provided written approval to resume injection.

Section B. MECHANICAL INTEGRITY

The Permittee is required to ensure each injection well maintains mechanical integrity at all times. The Director, by written notice, may require the Permittee to comply with a schedule describing when mechanical integrity demonstrations shall be made.

An injection well has mechanical integrity if:

- (a) There is no significant leak in the casing, tubing, or packer (Part I); and

(b) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore (Part II).

1. Demonstration of Mechanical Integrity (MI).

The operator shall demonstrate MI prior to commencing injection and periodically thereafter. Well-specific conditions dictate the methods and the frequency for demonstrating MI and are discussed in the Statement of Basis. The logs and tests are designed to demonstrate both internal (Part I) and external (Part II) MI as described above. The conditions present at this well site warrant the methods and frequency required in Appendix B of this Permit.

In addition to these regularly scheduled demonstrations of MI, the operator shall demonstrate internal (Part I) MI after any workover which affects the tubing, packer or casing.

The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluid into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director as soon as possible but no later than sixty (60) days after the test is complete.

2. Mechanical Integrity Test Methods and Criteria

EPA-approved methods shall be used to demonstrate mechanical integrity. Ground Water Section Guidance No. 34 "Cement Bond Logging Techniques and Interpretation", Ground Water Section Guidance No. 37, "Demonstrating Part II (External) Mechanical Integrity for a Class II injection well permit", and Ground Water Section Guidance No. 39, "Pressure Testing Injection Wells for Part I (Internal) Mechanical Integrity" are available from EPA and will be provided upon request.

The Director may stipulate specific test methods and criteria best suited for a specific well construction and injection operation.

3. Notification Prior to Testing.

The Permittee shall notify the Director at least 30 days prior to any scheduled mechanical integrity test. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

4. Loss of Mechanical Integrity.

If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity becomes evident during operation (such as presence of pressure in the TCA, water flowing at the surface, etc.), the Permittee shall notify the Director within 24 hours (see Part III Section E Paragraph 11(e) of this Permit) and the well shall be shut-in within 48 hours unless the Director requires immediate shut-in.

Within five days, the Permittee shall submit a follow-up written report that documents test results, repairs undertaken or a proposed remedial action plan.

Injection operations shall not be resumed until after the well has successfully been repaired and demonstrated mechanical integrity, and the Director has provided approval to resume injection.

Section C. WELL OPERATION

INJECTION BETWEEN THE OUTERMOST CASING PROTECTING UNDERGROUND SOURCES OF DRINKING WATER AND THE WELL BORE IS PROHIBITED.

Injection is approved under the following conditions:

1. Requirements Prior to Commencing Injection.

Well injection, including for new wells authorized by an Area Permit under 40 CFR 144.33 (c), may commence only after all well construction and pre-injection requirements herein have been met and approved. The Permittee may not commence injection until construction is complete, and

- (a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-10 or 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and
 - (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or
 - (ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

2. Injection Interval.

Injection is permitted only within the approved injection interval, listed in APPENDIX C. Additional individual injection perforations may be added provided that they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6.

3. Injection Pressure Limitation

- (a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injection or formation fluids into a USDW.
- (b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permittee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.

4. Injection Volume Limitation.

Injection volume is limited to the total volume specified in APPENDIX C.

If the injection zone is shown to contain fluids of less than 10,000 mg/L total dissolved solids (TDS), then an aquifer exemption decision will need to be made prior to approval for injection. If an aquifer exemption is approved, the cumulative injected fluid volume will need to be monitored to ensure that the injectate is not moving out of the authorized 1/4 mile radius.

5. Injection Fluid Limitation.

Injected fluids are limited to those which are brought to the surface in connection with conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). The well also may be used to inject approved Class II wastes brought to the surface such as drilling fluids and spent well completion, treatment and stimulation fluids. Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved. This well is NOT approved for commercial brine or other fluid disposal operation.

Fluid sources are listed in Appendix C of the Permit No. UT21062-07150.

6. Tubing-Casing Annulus (TCA)

The tubing-casing annulus (TCA) shall be filled with water treated with a corrosion inhibitor, or other fluid approved by the Director. The TCA valve shall remain closed during normal operating conditions and the TCA pressure shall be maintained at zero (0) psi.

If TCA pressure cannot be maintained at zero (0) psi, the Permittee shall follow the procedures in Ground Water Section Guidance No. 35 "Procedures to follow when excessive annular pressure is observed on a well."

Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS

1. Monitoring Parameters, Frequency, Records and Reports.

Monitoring parameters are specified in APPENDIX D. Pressure monitoring recordings shall be taken at the wellhead. The listed parameters are to be monitored, recorded and reported at the frequency indicated in APPENDIX D even during periods when the well is not operating.

Monitoring records must include:

- (a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;
- (b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;
- (c) the analytical techniques or methods used for analysis.

2. Monitoring Methods.

- (a) Monitoring observations, measurements, samples, etc. taken for the purpose of complying with these requirements shall be representative of the activity or condition being monitored.
- (b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.
- (c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.
- (d) Pressures are to be measured in pounds per square inch (psi).
- (e) Fluid volumes are to be measured in standard oil field barrels (bbl).
- (f) Fluid rates are to be measured in barrels per day (bbl/day).

3. Records Retention.

- (a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.
- (b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.
- (c) The Permittee shall retain records at the location designated in APPENDIX D.

4. Annual Reports.

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D. The report of fluids injected during the year must identify each new fluid source by well name and location, and the field name or facility name.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequent Annual Reports shall cover the period from January 1 through December 31 of the reporting year. Annual Reports shall be submitted by February 15 of the year following data collection. EPA Form 7520-11 may be copied and shall be used to submit the Annual Report, however, the monitoring requirements specified in this Permit are mandatory even if EPA Form 7520-11 indicates otherwise.

Section E. PLUGGING AND ABANDONMENT

1. Notification of Well Abandonment, Conversion or Closure.

The Permittee shall notify the Director in writing at least forty-five (45) days prior to: 1) plugging and abandoning an injection well, 2) converting to a non-injection well, and 3) in the case of an Area Permit, before closure of the project.

2. Well Plugging Requirements

Prior to abandonment, the injection well shall be plugged with cement in a manner which isolates the injection zone and prevents the movement of fluids into or between underground sources of drinking water, and in accordance with 40 CFR 146.10 and other applicable Federal, State or local law or regulations. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director.

3. Approved Plugging and Abandonment Plan.

The approved plugging and abandonment plan is incorporated into this Permit as APPENDIX E. Changes to the approved plugging and abandonment plan must be approved by the Director prior to beginning plugging operations. The Director also may require revision of the approved plugging and abandonment plan at any time prior to plugging the well.

4. Forty Five (45) Day Notice of Plugging and Abandonment.

The Permittee shall notify the Director at least forty-five (45) days prior to plugging and abandoning a well and provide notice of any anticipated change to the approved plugging and abandonment plan.

5. Plugging and Abandonment Report.

Within sixty (60) days after plugging a well, the Permittee shall submit a report (EPA Form 7520-13) to the Director. The plugging report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

- (a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or

- (b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.

6. Inactive Wells.

After any period of two years during which there is no injection the Permittee shall plug and abandon the well in accordance with Part II Section E Paragraph 2 of this Permit unless the Permittee:

- (a) Provides written notice to the Director;
- (b) Describes the actions or procedures the Permittee will take to ensure that the well will not endanger USDWs during the period of inactivity. These actions and procedures shall include compliance with mechanical integrity demonstration, Financial Responsibility and all other permit requirements designed to protect USDWs; and
- (c) Receives written notice by the Director temporarily waiving plugging and abandonment requirements.

PART III. CONDITIONS APPLICABLE TO ALL PERMITS

Section A. EFFECT OF PERMIT

The Permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The Permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR 142 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized by this Permit or by rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of any other Federal, State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment, for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations. Nothing in this Permit relieves the Permittee of any duties under applicable regulations.

Section B. CHANGES TO PERMIT CONDITIONS

1. Modification, Reissuance, or Termination.

The Director may, for cause or upon a request from the Permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR 124.5, 144.12, 144.39, and 144.40. Also, this Permit is subject to minor modification for causes as specified in 40 CFR 144.41. The filing of a request for modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit.

2. Conversions.

The Director may, for cause or upon a written request from the Permittee, allow conversion of the well from a Class II injection well to a non-Class II well. Conversion may not proceed until the Permittee receives written approval from the Director. Conditions of such conversion may include but are not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, well-specific monitoring and reporting following the conversion, and demonstration of practical use of the converted configuration.

3. Transfer of Permit.

Under 40 CFR 144.38, this Permit is transferable provided the current Permittee notifies the Director at least thirty (30) days in advance of the proposed transfer date (EPA Form 7520-7) and provides a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage and liability between them. The notice shall adequately demonstrate that the financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new Permittee. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory.

4. Permittee Change of Address.

Upon the Permittee's change of address, or whenever the operator changes the address where monitoring records are kept, the Permittee must provide written notice to the Director within 30 days.

5. Construction Changes, Workovers, Logging and Testing Data

The Permittee shall give advance notice to the Director, and shall obtain the Director's written approval prior to any physical alterations or additions to the permitted facility. Alterations or workovers shall meet all conditions as set forth in this permit. The Permittee shall record any changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workovers, logging, or test data to EPA within sixty (60) days of completion of the activity.

Following the completion of any well workovers or alterations which affect the casing, tubing, or packer, a successful demonstration of mechanical integrity (Part III, Section F of this Permit) shall be made, and written authorization from the Director received, prior to resuming injection activities.

Section C. SEVERABILITY

The Provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

Section D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 and 40 CFR 144.5, information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the Permittee, and
- information which deals with the existence, absence or level of contaminants in drinking water.

Section E. GENERAL PERMIT REQUIREMENTS

1. Duty to Comply.

The Permittee must comply with all conditions of this Permit. Any noncompliance constitutes a violation of the Safe Drinking Water Act (SDWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the Permittee need not comply with the provisions of this Permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34. All violations of the SDWA may subject the Permittee to penalties and/or criminal prosecution as specified in Section 1423 of the SDWA.

2. Duty to Reapply.

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, under 40 CFR 144.37 the Permittee must apply for a new permit prior to the expiration date.

3. Need to Halt or Reduce Activity Not a Defense.

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

4. Duty to Mitigate.

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.

5. Proper Operation and Maintenance.

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

6. Permit Actions.

This Permit may be modified, revoked and reissued or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

7. Property Rights.

This Permit does not convey any property rights of any sort, or any exclusive privilege.

8. Duty to Provide Information.

The Permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. The Permittee is required to submit any information required by this Permit or by the Director to the mailing address designated in writing by the Director.

9. Inspection and Entry.

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

10. Signatory Requirements.

All applications, reports or other information submitted to the Director shall be signed and certified according to 40 CFR 144.32. This section explains the requirements for persons duly authorized to sign documents, and provides wording for required certification.

11. Reporting Requirements.

- (a) **Planned changes.** The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.
- (b) **Anticipated noncompliance.** The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) **Monitoring Reports.** Monitoring results shall be reported at the intervals specified in this Permit.
- (d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.
- (e) **Twenty-four hour reporting.** The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:
 - (i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or
 - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Information shall be provided, either directly or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning (800) 227-8917 and requesting EPA Region VIII UIC Program Compliance and Technical Enforcement Director, or by contacting the EPA Region VIII Emergency Operations Center at (303) 293-1788.

In addition, a follow up written report shall be provided to the Director within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- (f) Oil Spill and Chemical Release Reporting: The Permittee shall comply with all reporting requirements related to the occurrence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website <http://www.nrc.uscg.mil/index.htm>.
- (g) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.
- (h) Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

Section F. FINANCIAL RESPONSIBILITY

1. Method of Providing Financial Responsibility.

The Permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). No substitution of a demonstration of financial responsibility shall become effective until the Permittee receives written notification from the Director that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect changes in such costs and may require the Permittee to provide a revised demonstration of financial responsibility.

2. Insolvency.

In the event of:

- (a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or
- (b) suspension or revocation of the authority of the trustee institution to act as trustee; or

- (c) the institution issuing the financial mechanism losing its authority to issue such an instrument

the Permittee must notify the Director in writing, within ten (10) business days, and the Permittee must establish other financial assurance or liability coverage acceptable to the Director within sixty (60) days after any event specified in (a), (b), or (c) above.

The Permittee must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor, if named as debtor of a corporate guarantee, must make such a notification as required under the terms of the guarantee.

APPENDIX A

WELL CONSTRUCTION REQUIREMENTS

DRILLING OPERATIONS CONVERSION OPERATIONS

The well will be killed with produced formation water. The 2-3/8" tubing string will be pulled from the well.

A bridge plug will be set at +/-4727 and a 20' cement plug will be dump bailed on top of the bridge plug. This will abandon the existing perforations at 6150-52', 6130-32' & 6050-52'.

A bridge plug will be set at +/-3450 and a 20' cement plug will be dump bailed on top of the bridge plug.

The casing and bridge plug will be pressure tested to 1000 psi.

The proposed injection intervals in the upper Wasatch will be perforated from 3044-53', 3095-3105', 3113-72', 3183-91' & 3310-38' with 2 shots per foot, 180 degree phase.

An injection packer will be set at +/- 3000'. 2-3/8" 4.7# J-55 injection tubing will be run in the hole to the top of the packer. The hole will be displaced with fresh water annulus fluid containing corrosion inhibitors and oxygen scavengers. The tubing will be spaced out and latched onto the packer. The wellhead will be installed and the perforations will be broken down to insure communication to the injection intervals.

Plug placement will be verified by tagging the top of the plug after the cement has had adequate time to set. If a bridge plug is used at the base of the cement plug, tagging the top of the plug is not necessary.

PROPOSED CONVERSION TO WATER DISPOSAL WELL

WELL NAME: BUCK CAMP 11-22-14-36

DATE: 15-Mar-07

LOCATION: SWSW SECTION 36-T11S-R22E, 861' FSL & 475' FWL, UINTAH CTY, UTAH

Lat 39.812208, Long -109.411289

API #: 43 047 37836

SPUD DATE: 6/15/2006

RIG RELEASED: 6/23/2006

KB ELEV: 5,411 Ft

GL ELEV: 5,395 Ft

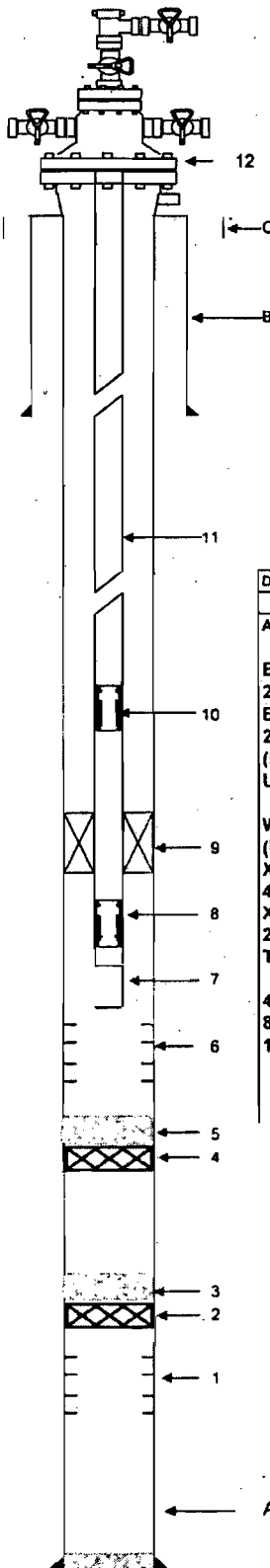
TD: 6,690 Ft

PBTD: 5,995 Ft

TUBULARS:	SIZE Inch	WEIGHT #/ft	GRADE	THREAD	DEPTH	OTHER
Conductor:	14				135	
SURFACE:	8-5/8	32	J-55	ST&C	2,057	
PRODUCTION:	4-1/2	11.6	M-80	LT&C	6,684	
TUBING:	2-3/8	4.7	J-55	EUE	3,000	

CURRENT ZONE: ABANDON MESAVERDE PERFS 6050'-6152' GROSS INTERVAL

WASATCH INJECTION PERFS 3044'-3338' GROSS INTERVAL



DESCRIPTION (starting at the bottom)	LENGTH (ft)	DEPTH (ft)	#
BOTTOM OF TOOL STRING		3,005	
Abandoned Mesaverde Perforations 6150-52', 6130-32' & 6050-52'			1
Bridge Plug set at +/- 4,724' at top of Mesaverde			2
20' Cement Plug			3
Bridge Plug set at +/- 3,450'			4
20' Cement Plug			5
(Lower confining bed 3338-3700)			
Upper Wasatch Injection Perforations 3044-53', 3095-3105', 3113-72', 3183-91' & 3310-38'			6
Wire Line Re-Entry Guide			7
(Upper confining bed 2673-3044)			
XN Nipple			8
4-1/2" Packer set at +/- 3,000'			9
X Nipple			10
2-3/8" 4.7 #/ft J-55 EUE tubing			11
Tubing Hanger & Wellhead			12
4-1/2" 11.6#/ft M-80 LT&C		6,684	A
8-5/8" 32# J-55 ST&C		2,057	B
14" Line Pipe		135	C

DIAGRAM NOT TO SCALE

Buck Camp conversion revised.BMP

APPENDIX B

LOGGING AND TESTING REQUIREMENTS

Logs.

Logs will be conducted according to current UIC guidance. It is the responsibility of the Permittee to obtain and use guidance prior to conducting any well logging required as a condition of this permit.

WELL NAME: Buck Camp 11-22-14-36 WD	
TYPE OF LOG	DATE DUE
Injection Profile Survey	Prior to injection
TEMP	The test will be performed 1 year after injection and at 3 years after injection. If confinement is not confirmed, then EPA may consider limiting injection rates of prohibiting injection, if necessary to protect underground sources of drinking water.

Tests.

Tests will be conducted according to current UIC guidance. It is the responsibility of the Permittee to obtain and use guidance prior to conducting any well test required as a condition of this permit.

The latest version of the "EPA Region 6 UIC Pressure Falloff Testing Guideline" shall be used as a guideline for designing the required Pressure Falloff Test. This guideline often refers to hazardous waste wells and regulatory terms associated with them, but the pressure falloff test design, test methods, and test interpretation guidelines are all very appropriate to Class II wells.

WELL NAME: Buck Camp 11-22-14-36 WD	
TYPE OF TEST	DATE DUE
Pressure Fall-Off Test	The test will be performed 1 year after injection and at 3 years after injection. If confinement is not confirmed, then EPA may consider limiting injection rates of prohibiting injection, if necessary to protect underground sources of drinking water.
Injection Zone Water Sample	Prior to injection; swab testing on formation-conductivity to be monitored for consistency prior to sample collection; salinity profile on completion fluids to be submitted
Standard Annulus Pressure	Prior to injection and at least once every 5 years thereafter
Pore Pressure	Prior to injection
Step Rate Test	Within 30 days of injection operations

APPENDIX C

OPERATING REQUIREMENTS

MAXIMUM ALLOWABLE INJECTION PRESSURE:

Maximum Allowable Injection Pressure (MAIP) as measured at the surface shall not exceed the pressure(s) listed below.

WELL NAME	MAXIMUM ALLOWED INJECTION PRESSURE (psi)
	ZONE 1 (Upper)
Buck Camp 11-22-14-36 WD	855

INJECTION INTERVAL(S):

Injection is permitted only within the approved injection interval listed below. Injection perforations may be altered provided they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6. Specific injection perforations can be found in Appendix A.

Well Name	TDS (mg/L)	Specific Gravity (mg/L)
Rock House 2D-36	25,487	1.018
Rock House 3-32	30,746	1.021
Rock House 4-36	31,853	1.022
Rock House 6D-32	30,064	1.021
Rock House 7-32	33,632	1.023
Rock House 11-31	29,622	1.020
Rock House 12D-32	24,922	1.017
Archy Bench 12-23-42-16	8,395	1.006
Archy Bench 11-24-24-32	5,087	1.005
Archy Bench 12-23-22-16	3,159	1.003
East Bench 11-22-11-16	30,079	1.022
Big Pack 12-21-22-2	51,392	1.036
Buck Camp 11-22-11-25	48,953	1.035
Buck Camp 11-22-11-26	51,773	1.037
Buck Camp 11-22-11-36	49,578	1.034
Buck Camp 12-22-21-2	30,026	1.021
Buck Camp 31-5	11,307	1.009
Buck Camp 6-15	8,985	1.007
Buck Camp 3-12	45,574	1.032
Hanging Rock 12-24-11-18	14,180	1.011
Rainbow 11-24-31-16	8,036	1.006
Rock Hopper 29-11	11,171	1.009
Rock House 5-32	28,934	1.021
Rock House 6D-32	5,781	1.004
Rock House 10D-32	21,720	1.015
Rock House 10-22-21-36	59,186	1.042
Rock House 10-22-13-36	34,672	1.025
Rock House 10-22-14-36	34,012	1.024
Rock House 10-22-31-36	43,384	1.031
Stump Jumper 11-23-23-33B	9,363	1.007
Thurston 12-1	22,763	1.016

WELL NAME: Buck Camp 11-22-14-36 WD

FORMATION NAME	APPROVED INJECTION INTERVAL (KB, ft)		FRACTURE GRADIENT (psi/ft)
	TOP	BOTTOM	
Wasatch Formation	3,044.00	3,338.00	0.730

ANNULUS PRESSURE:

The annulus pressure shall be maintained at zero (0) psi as measured at the wellhead. If this pressure cannot be maintained, the Permittee shall follow the procedures listed under Part II, Section C. 6. of this permit.

MAXIMUM INJECTION VOLUME:

There is no limitation on the number of barrels per day (bbls/day) of water that shall be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Appendix C.

If the injection zone is shown to contain fluids of less than 10,000 mg/L total dissolved solids (TDS), then an aquifer exemption decision will need to be made prior to approval for injection. If an aquifer exemption is approved, the cumulative injected fluid volume limit is 17,225,989 bbl and will need to be monitored to ensure that the injectate is not moving out of the authorized 1/4 mile radius.

APPENDIX D

MONITORING AND REPORTING PARAMETERS

This is a listing of the parameters required to be observed, recorded, and reported. Refer to the permit Part II, Section D, for detailed requirements for observing, recording, and reporting these parameters.

OBSERVE WEEKLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS	
OBSERVE AND RECORD	Injection pressure (psig)
	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbls)

ANNUALLY	
ANALYZE	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH

ANNUALLY	
REPORT	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and averaged annulus pressure(s) (psig)
	Each month's averaged injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

Records of all monitoring activities must be retained and made available for inspection at the following location:

Enduring Resources
475 Seventeenth Street, Suite 1500
Denver, CO 80202

APPENDIX E

PLUGGING AND ABANDONMENT REQUIREMENTS

PLUGGING AND ABANDONMENT REQUIREMENTS

The operator will file and obtain approval for a detailed P&A plan for approval prior to initiating any P&A operations. Typical P&A operations may be as follows:

1. Set wireline bridge plug above the injection interval at approximately 3000 ft. Pressure test the casing string and the bridge plug. Dump 20' cement on top of the bridge plug, abandoning the injection zone perforations.
2. Go in hole with tubing and pump four 100 ft cement plugs from 2921' to 2821' across USDW at 2871', from 2718' to 2618' across the Wasatch Top at 2668', from 2107' to 2007' across surface casing at 2057' and from 100' to surface. Cement will be Class G with additives. Each 100' plug will be approximately 8 sacks of cement.
3. Remove wellhead. Install plug and abandon marker. Remove all equipment and reclaim location.

Plug placement will be verified by tagging the top of the plug after the cement has had adequate time to set. If a bridge plug is used at the base of the cement plug, tagging the top of the plug is not necessary.

A plugging procedure will be submitted and approval obtained with the appropriate regulatory agencies before any plugging operations are conducted.

PROPOSED PLUG AND ABANDON SCHEMATIC

WELL NAME: BUCK CAMP 11-22-14-36

DATE: 15-Mar-07

LOCATION: SWSW SECTION 36-T11N-R22E, B51' FSL & 475' FWL, UTAH CTY, UTAH

Lat 39.812208, Long -109.411289

API #: 43 047 37836

SPUD DATE: 6/15/2006

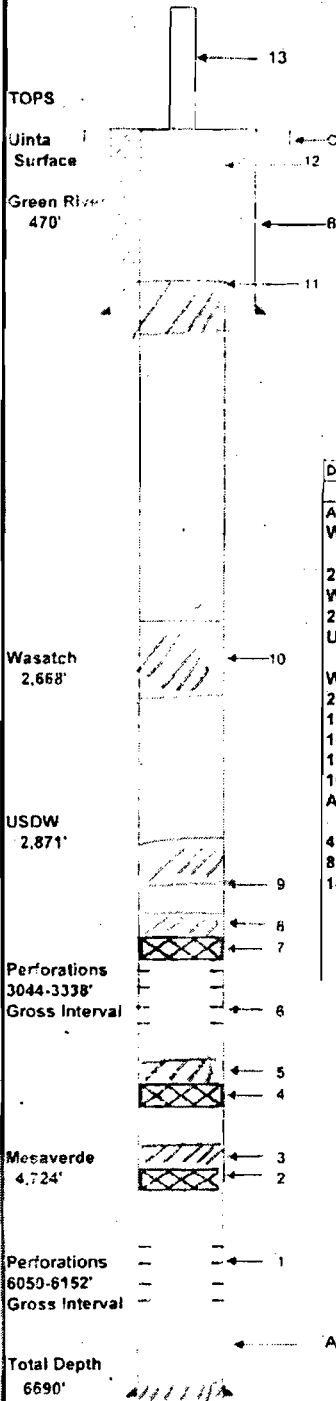
RIG RELEASED: 6/23/2006

KB ELEV: 5,411 Ft

GL ELEV: 5,395 Ft

TD: 6,690 Ft

PBTD: Surface Ft



TUBULARS:	SIZE Inch	WEIGHT #/ft	GRADE	THREAD	DEPTH	OTHER
Conductor:	14				135	
SURFACE:	8-5/8	32	J-55	ST&C	2,057	
PRODUCTION:	4-1/2	11.6	M-80	LT&C	6,684	
TUBING:						

CURRENT ZONE: ABANDON MESAVERDE PERFS 6050'-6152' GROSS INTERVAL

ABANDON WASATCH INJECTION PERFS 3044'-3338' GROSS INTERVAL

DESCRIPTION (starting at the bottom)	LENGTH (ft)	DEPTH (ft)	#
BOTTOM OF TOOL STRING		4,500	
Abandoned Mesaverde Perforations 6150-52'			1
Wire line set bridge plug set at +/- 4,724' at top of Mesaverde			2
20' cement plug			3
Wire line set bridge plug set at +/- 3,450'			4
20' cement plug			5
Upper Wasatch Injection Perforations 3044-53', 3095-3105', 3113-72', 3183-91' & 3310-38'			6
Wire line set bridge plug set at +/- 3,000'			7
20' cement plug dumped with wire line bailer			8
100' cement plug from 2921' to 2821'			9
100' cement plug from 2718' to 2618'			10
100' cement plug from 2607' to 2507' 2007' to 2107'			11
100' cement plug from 100' to surface			12
Abandoned Well marker			13
4-1/2" 11.6#/ft M-80 LT&C		6,684	A
8-5/8" 32# J-55 ST&C		2,057	B
14" Line Pipe		135	C

DIAGRAM NOT TO SCALE

Buck Camp P&A revised.BMP

APPENDIX F

CORRECTIVE ACTION REQUIREMENTS

No corrective action is deemed necessary for this project.

STATEMENT OF BASIS

**ENDURING RESOURCES LLC
BUCK CAMP 11-22-14-36 WD
UINTAH COUNTY, UT**

EPA PERMIT NO. UT21062-07150

CONTACT: Patricia Pfeiffer
U. S. Environmental Protection Agency
Ground Water Program, 8P-W-GW
1595 Wynkoop Street
Denver, Colorado 80202-1129
Telephone: 1-800-227-8917 ext. 312-6271

This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

EPA UIC permits regulate the injection of fluids into underground injection wells so that the injection does not endanger underground sources of drinking water. EPA UIC permit conditions are based upon the authorities set forth in regulatory provisions at 40 CFR Parts 144 and 146, and address potential impacts to underground sources of drinking water. Under 40 CFR 144.35 Issuance of this permit does not convey any property rights of any sort or any exclusive privilege, nor authorize injury to persons or property of invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which the content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date when issued, the Permit authorizes the construction and operation of injection wells so that the injection does not endanger underground sources of drinking water, governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).

PART I. General Information and Description of Facility

Enduring Resources LLC
475 17th Street, Suite 1500
Denver, CO 80202

on

May 23, 2007

submitted an application for an Underground Injection Control (UIC) Program Permit or Permit Modification for the following injection well or wells:

In the original application, Enduring Resources proposed to drill and complete a Class II well. Enduring Resources made an economic decision, and requested modification of their original Permit to instead allow use of a pre-existing wellbore to be converted into an injection well. The pre-existing wellbore is located approximately 1 mile to the south of the originally proposed drill site.

The injection well will be used for the disposal of water produced from natural gas wells in the Rock House Field area, Uinta County, Utah. The injection fluids currently proposed for disposal will be produced water from the Wasatch and Mesaverde Formations.

The well is located within the exterior boundaries of the Uintah & Ouray Indian Reservation. Notice of intent of the EPA proposed permit decision will be published in the local newspaper and notices will be sent to the U.S. Bureau of Land Management-Vernal Office, Bureau of Indian Affairs, Ute Indian Tribe, and State of Utah-Natural Resources Division.

Buck Camp 11-22-14-36 WD
851' FSL 475' FWL, SWSW S36, T11S, R22E
Uintah County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

The application, including the required information and data necessary to issue or modify a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed and determined by EPA to be complete.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

TABLE 1.1		
WELL STATUS / DATE OF OPERATION		
CONVERSION WELLS		
Well Name	Well Status	Date of Operation
Buck Camp 11-22-14-36 WD	Conversion	N/A

PART II. Permit Considerations (40 CFR 146.24)

Hydrogeologic Setting

The Uinta Basin is a major sedimentary basin of the western-central Rocky Mountain province. The basin is both a structural and a topographic basin located in northeastern Utah and northwest Colorado. The surface terrain is high mountain desert in the central part of the basin, and elevations vary from approximately 5,600 feet to over 11,000 feet above sea level. The topographic basin extends about 200 miles west to east and 173 miles north to south and has an area of about 10,000 square miles. It is strongly asymmetric, bounded by the Uinta Mountain uplift on the north and by the Wasatch Mountain uplift and the eastern faulted margin of the Wasatch Plateau on the west. Dip on the southwest and southeast flanks range from a few degrees to up to 15°. The north flank is highly complex, with major faulting and steep to overturned beds. The basin is considered to be a major producer of gas for the United States. The greatest portion of the energy resources are hydrocarbons, in the forms of coal, oil and gas, bituminous sandstone and limestone, and some gilsonite. The Uintah & Ouray Indian Reservation comprises just over 4 million acres of this area, reaching from the Utah-Colorado border west to the Wasatch Mountain Range.

Groundwater hydrology of the Uinta Basin is controlled primarily by the geologic structure of the region. Recharge of groundwater is greatest near the northern edge of the basin. On the south flank of the basin, most recharge is in the areas of highest altitude where precipitation is greatest. However, because of the low dip of the south flank, few formations except the Green River Formation are exposed to recharge. The major direction of ground water flow in this portion of the Uinta Basin is predominantly toward the White River. The White River is located approximately 8 miles to the north of the proposed well location. Intermittent drainages near the well feed into the White River. Bitter Creek is located within 500 feet of the proposed well location.

During the Eocene time, large amounts of sediment from adjacent higher areas were deposited in various lacustrine and fluvial environments in the basin. These sediments total more than 15,000 feet thick in the center of the basin and contain important mineral resources. During the Sevier/Laramide mountain building episode, deformation (thrust faulting and downwarping) occurred in the basin. The basin had several lakes that accumulated large amounts of organic material, and later heat and pressure of burial changed the organic-rich sediment into the thick oil shale of the middle and upper Green River Formation. The geologic formations of interest for this well, in descending order, are the Uinta and Green River Formations and the Wasatch Group.

The Uinta Formation is exposed at the surface in the area of the proposed well. The Uinta is comprised of thinly bedded calcareous shale, siltstone, and fine-grained sandstone. Hydraulic conductivity of the Uinta may be greatly enhanced by naturally occurring fractures.

The Green River Formation is comprised of sandstones, limestone and shale beds that were deposited along the edges and on the broad level floor of Lake Uinta as it expanded and contracted through time. Deposition in and around Lake Uinta consisted of open to marginal lacustrine sediments that make up the Green River Formation. The cyclic nature of deposition in the southern shore area resulted in numerous stacked deltaic deposits. Distributary mouth bars, distributary channels, and near shore bars are the primary producing sandstone reservoirs in the area (Ref: "Reservoir Characterization of the Lower Green River Formation, Southwest Uinta Basin, Utah Biannual Technical Progress Report, 4/1/99 - 9/30/99", by C. D. Morgan, Program Manager, November 1999, Contract DE AC26 98BC15103). Intervals in which porous sandstones occur are comprised of tight sandstone and interbedded shale forming the confining layers to the individual sandstone lenses. The top member of the Green River Formation, the Parachute Creek Member, is exposed at the surface approximately 4 miles from the well location. In some areas

there is complex intertonguing between the sediments of the underlying Wasatch and the Green River Formation. In the eastern portion of the basin, the Green River thins to about 1000 ft as the lower part pinches out. Gilsonite, a naturally occurring solid amorphous asphaltic bitumen originated by solidification of petroleum, occurs in veins that fill the vertical tensional fractures in this area that are rooted in the upper Green River oil shale.

The Wasatch Group, in descending order, is divided into the Colton, Flagstaff, and North Horn Formations. The Flagstaff Formation is not present at the proposed well location. The Colton is described as being primarily sandstone with mudstone (shale) and minor limestone. The sandstone units are characterized by mud chips, mud clasts, and discontinuous finer-grained beds. The Colton displays complex reservoir geometry, and heterogeneity is typical. The North Horn consists of conglomerate, sandstone, siltstone, and lacustrine limestone and shale. The basal unit consists of thin lacustrine shale and lime wackestone overlain by variegated floodplain mudstones and fine-grained fluvial sandstones.

Geologic Setting (TABLE 2.1)

TABLE 2.1
GEOLOGIC SETTING
Buck Camp 11-22-14-36 WD

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Uinta Formation	0	148	0 - 3,000	calcareous shale, claystone, sandstone, and bentonite beds
Green River Formation	148	2,673	0 - 3,000	greenish-gray shales with interbedded sandstone, marlstone, limestone, oil-shale, and trona (sodium carbonate)
Wasatch Formation	2,673	4,724	3,000 - 35,000	shale and claystone with interbedded conglomerate and sandstone
Mesaverde Formation	4,724	7,343	10,000 - 35,000	interbedded sandstone, siltstone, and shale with minor coal beds

Proposed Injection Zone(s) (TABLE 2.2)

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by a confining zone which is free of known open faults or fractures within the Area of Review.

The Wasatch is the proposed injection zone. EPA has evaluated the capacity of the proposed injection zone to accept fluids, using porosity data and the effective height from the Buck Camp 11-22-14-36 production well. The portion of the Wasatch Formation proposed for injection was calculated to have a cumulative volume capacity of approximately 17,225,989 barrels within the quarter mile area of review.

An Injection Profile Survey, using either a spinner or tracer test, will be required prior to injection. Along with a profile of fluid loss versus depth, these data provide an indication of the absence of

fluid channeling away from the well bore, and also can be used to determine an accurate volume that the formation can receive should an aquifer exemption be necessary.

Formation fluid sampling and analysis of the injection zone will be required prior to injection. Swab testing will be conducted, with conductivity monitored for consistency before the sample is collected. The operator will also provide a salinity profile on the completion fluids.

If the injection zone is shown to contain fluids of less than 10,000 mg/l total dissolved solids (TDS), an aquifer exemption will be required prior to approval for injection.

TABLE 2.2
INJECTION ZONES
Buck Camp 11-22-14-36 WD

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Wasatch Formation	3,044	3,338	3,000 - 35,000	0.730		N/A

* **C - Currently Exempted**
E - Previously Exempted
P - Proposed Exemption
N/A - Not Applicable

Confining Zone(s) (TABLE 2.3)

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

Impermeable intervals of the Wasatch are identified as the confining zones that will prevent migration of fluid outside of the injection zone. The following estimated depths are based on the analysis of the porosity, gamma ray, resistivity, and caliper wireline logs for the Buck Camp 11-22-14-36 production well.

1. The upper confining zone, a 371 foot section of shale and claystone, is estimated at between 2673-3044 feet below ground surface.

2. The lower confining zone, a 362 foot section that consists primarily of shale and claystone, is estimated at between 3338-3700 feet below ground surface.

Gilsonite veins in the Uinta Basin vary in width from fractions of an inch to almost 18 feet, and average about 3 to 6 feet. These veins can be vertically continuous for hundreds to approximately 2,000 feet and more. Because there is concern that the fractures associated with these gilsonite veins could act as conduits for the fluid migration out of the proposed injection zone, a pressure falloff test and temperature survey will be required after 1 year and after 3 years of operation to evaluate continuing confinement of injection fluid within the injection zone. If confinement is not confirmed, EPA may consider limiting injection rates or prohibiting injection, if necessary to protect underground sources of drinking water.

TABLE 2.3
CONFINING ZONES
Buck Camp 11-22-14-36 WD

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Wasatch Formation-Upper	primarily shale and claystone	2,673	3,044
Wasatch Formation-Lower	primarily shale and claystone	3,338	3,700

Underground Sources of Drinking Water (USDWs) (TABLE 2.4)

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

Based on the Technical Publication No. 92, Utah Department of Natural Resources, the base of USDWs at the proposed well location is found at 2,871 feet below ground surface. However, according to published information, water in the Uinta, Green River, and Wasatch aquifers has been found to range from fresh to briny. Therefore, unless water samples are collected and prove otherwise, these will be considered to be USDWs. The Douglas Creek-Renegade aquifer, consisting of the Douglas Creek Member of the Green River Formation and the Renegade Tongue of the Wasatch Formation, is a basin-wide aquifer underlying the Duchesne River-Uinta aquifer. The Douglas Creek-Renegade aquifer is thick, and has a hydraulic conductivity ranging from 0.05 to 0.25 ft/d in the southeastern part of the Uinta Basin (Holmes and Kimball, 1983).

TABLE 2.4
UNDERGROUND SOURCES OF DRINKING WATER (USDW)
Buck Camp 11-22-14-36 WD

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta Formation	calcareous shale, claystone, sandstone, and bentonite beds	0	148	0 - 3,000
Green River	greenish-gray shales with interbedded sandstone, marlstone, limestone, oil-shale and trona (sodium carbonate); USGS Pub. 92 places base of USDW at 2,871 ft bgs	148	2,673	0 - 3,000
Wasatch Formation	shale and claystone with interbedded conglomerate and sandstone	2,673	4,724	3,000 - 35,000

PART III. Well Construction (40 CFR 146.22)

TABLE 3.1
WELL CONSTRUCTION REQUIREMENTS
Buck Camp 11-22-14-36 WD

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
line pipe	20.00	14.00	0 - 135	0 - 135
surface	12.25	8.63	0 - 2,057	0 - 2,057
longstring	7.88	4.50	0 - 6,683	1,450 - 6,622

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

Casing and Cementing (TABLE 3.1)

The well construction plan was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction details for this "new" injection well is shown in TABLE 3.1.

Remedial cementing may be required if the casing cement is shown to be inadequate by cement bond log or other demonstration of Part II (External) mechanical integrity.

Tubing and Packer

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

Tubing-Casing Annulus (TCA)

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

Monitoring Devices

The permittee will be required to install and maintain wellhead equipment that allows for monitoring pressures and providing access for sampling the injected fluid. Required equipment may include but is not limited to: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) fittings or pressure gauges attached to the injection tubing and the TCA for monitoring the injection and TCA pressure; and 4) a tap on the injection line, isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)

Bitter Creek 1 is located in T11S-R23E-S30, approximately 1 mile away. It is the only plugged and abandoned well in the nearby area. The well was initially plugged in August 1961. In September 1961, the well was re-entered with plugs drilled out to 4758 ft bgs, then re-plugged. The well has casing set at 6804 ft bgs. A temperature survey concluded that the top of cement outside casing is at 4823 ft below ground surface. The engineer for the USGS reviewed the well and declared that "the following wells have been satisfactorily abandoned and approved by his agency."

After reviewing the State of Utah, Division of Water Rights web page, it was determined that Enduring Resources owns the only water well in the AOR. The well is drilled 600 ft below ground surface.

Gilsonite veins are displayed at the surface within 2.5 miles of the proposed well location.

Four production wells, (Buck Camp 12-22-21-2, Buck Camp (2-2) 12-22-31-2, Buck Camp 12-22-42-2, and Buck Camp (4-36) 11-22-11-36) are located within 1 mile of the proposed injection well's location. The open hole log data for all of these wells was reviewed for the presence of both the upper and lower confining zone. All of the wells reviewed had both of the confining zones present.

TABLE 4.1
AOR AND CORRECTIVE ACTION

Well Name	Type	Status (Abandoned Y/N)	Total Depth (ft)	TOC Depth (ft)	CAP Required (Y/N)
Buck Camp 11-22-14-36 WSW	Water Source	No	600	0	No

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

Area Of Review

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

After reviewing the State of Utah, Division of Water Rights web page, it was determined that there are no drinking water wells in the AOR.

Corrective Action Plan

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

No corrective action is required.

PART V. Well Operation Requirements (40 CFR 146.23)

Enduring Resources will be the sole operator of the proposed Buck Camp 11-22-14-36 WD injection well. To monitor and record injection pressures, each well head will be equipped with a pressure chart that will be read by an approved Enduring Resources employee (pumper) on a weekly basis. Electronic data from the pressure chart will be checked daily for accuracy and compliance with system requirements.

Enduring Resources is requiring truck drivers hauling disposable water to the wells to be pre-qualified and be identified with a truck number and driver number. No driver will be able to enter the site without pre-authorization. No water will be accepted from any industrial process or from fracture fluids, or from any source other than those pre-screened and pre-approved by Enduring Resources and approved by the EPA. Enduring Resource will be maintaining chain of custody documentation.

The Buck Camp 11-22-14-36 WD injection well will be enclosed inside a chain link fence. All fence gates will be locked and keys or entrance codes will only be provided to authorized Enduring Resources employees or contractors.

TABLE 5.1
INJECTION ZONE PRESSURES
Buck Camp 11-22-14-36 WD

Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
Wasatch Formation	3,044	0.730	855

Approved Injection Fluid

The approved injection fluid is limited to Class II injection well fluids pursuant to 40 CFR § 144.6(b). For disposal wells injecting water brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production, the fluid may be commingled and the well used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Injection of non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes, and vacuum truck and drum rinsate from trucks and drums transporting or containing non-exempt waste, is prohibited.

Well Name	TDS (mg/L)	Specific Gravity (mg/L)
Rock House 2D-36	25,487	1.018
Rock House 3-32	30,746	1.021
Rock House 4-36	31,853	1.022
Rock House 6D-32	30,064	1.021
Rock House 7-32	33,632	1.023
Rock House 11-31	29,622	1.020
Rock House 12D-32	24,922	1.017
Archy Bench 12-23-42-16	8,395	1.006
Archy Bench 11-24-24-32	5,087	1.005

Archy Bench 12-23-22-16	3,159	1.003
East Bench 11-22-11-16	30,079	1.022
Big Pack 12-21-22-2	51,392	1.036
Buck Camp 11-22-11-25	48,953	1.035
Buck Camp 11-22-11-26	51,773	1.037
Buck Camp 11-22-11-36	49,578	1.034
Buck Camp 12-22-21-2	30,026	1.021
Buck Camp 31-5	11,307	1.009
Buck Camp 6-15	8,985	1.007
Buck Camp 3-12	45,574	1.032
Hanging Rock 12-24-11-18	14,180	1.011
Rainbow 11-24-31-16	8,036	1.006
Rock Hopper 29-11	11,171	1.009
Rock House 5-32	28,934	1.021
Rock House 6D-32	5,781	1.004
Rock House 10D-32	21,720	1.015
Rock House 10-22-21-36	59,186	1.042
Rock House 10-22-13-36	34,672	1.025
Rock House 10-22-14-36	34,012	1.024
Rock House 10-22-31-36	43,384	1.031
Stump Jumper 11-23-23-33B	9,363	1.007
Thurston 12-1	22,763	1.016

Injection Pressure Limitation

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs.

A step rate test will be required for the proposed injection zone to determine the fracture gradient for the zone. The initial Maximum Allowable Injection Pressure (MAIP) of 855 psig, based on an estimated fracture gradient of 0.73 psi/ft, will initially be approved until results of the step rate test are evaluated.

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP), as measured at the surface, for this Permit.

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

- FP = formation fracture pressure (measured at surface)
- fg = fracture gradient (from submitted data or tests)
- sg = specific gravity (of injected fluid)
- d = depth to top of injection zone (or top perforation)

Injection Volume Limitation

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

If the injection zone is shown to contain fluids of less than 10,000 mg/L total dissolved solids (TDS), then an aquifer exemption decision will need to be made prior to approval for injection. If an aquifer exemption is approved, the cumulative injected fluid volume will need to be monitored to ensure that the injectate is not moving out of the authorized 1/4 mile radius.

Mechanical Integrity (40 CFR 146.8)

An injection well has mechanical integrity if:

1. there is no significant leak in the casing, tubing, or packer (Part I); and
2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependent upon well-specific conditions as explained below.

PART VI. Monitoring, Recordkeeping and Reporting Requirements

Injection Well Monitoring Program

At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, annulus pressure, monthly injection flow rate and cumulative fluid volume. This information is required to be reported annually as part of the Annual Report to the Director.

PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)

Plugging and Abandonment Plan

Prior to abandonment, the well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with any applicable Federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520 13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The plugging and abandonment plan is described in Appendix E of the Permit.

PART VIII. Financial Responsibility (40 CFR 144.52)

Demonstration of Financial Responsibility

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

Surety Bond, received October 10, 2006
--

Evidence of continuing financial responsibility is required to be submitted to the Director annually.

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL	OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____	5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47077
2. NAME OF OPERATOR: Enduring Resources, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 475 17th Street, Suite 1500 CITY Denver STATE CO ZIP 80202		7. UNIT or CA AGREEMENT NAME: N/A
PHONE NUMBER: (303) 350-5114		8. WELL NAME and NUMBER: Buck Camp 11-22-11-36
10. FIELD AND POOL, OR WILDCAT: Wildcat		

4. LOCATION OF WELL	FOOTAGES AT SURFACE: 494' FNL - 482' FWL S.L.B.& M.	COUNTY: Uintah
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 36 11S 22E		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 9/11/2007	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: Closed Drilling Pits
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Finished closing pits.

NAME (PLEASE PRINT) Alvin R. (Al) Arlian	TITLE Landman - Regulatory Specialist
SIGNATURE 	DATE 9/11/2007

(This space for State use only)

RECEIVED

SEP 13 2007

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

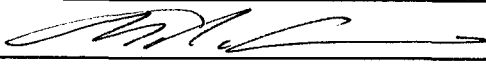
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47077
2. NAME OF OPERATOR: Enduring Resources, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 475 17th Street, Suite 1500 CITY Denver STATE CO ZIP 80202		7. UNIT or CA AGREEMENT NAME: N/A
PHONE NUMBER: (303) 350-5114		8. WELL NAME and NUMBER: Buck Camp 11-22-11-36
4. LOCATION OF WELL FOOTAGES AT SURFACE: 494' FNL - 482' FWL S.L.B.& M. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 36 11S 22E		9. API NUMBER: 4304736277
		10. FIELD AND POOL, OR WILDCAT: Wildcat
		COUNTY: Uintah
		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 11/9/2007	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: Pit Reseeded
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

11-9-2007 Pit has been backfilled and reseeded.

NAME (PLEASE PRINT) Alvin R. (Al) Arlian	TITLE Landman - Regulatory Specialist
SIGNATURE 	DATE 11/9/2007

(This space for State use only)

RECEIVED

NOV 14 2007

DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47077
2. NAME OF OPERATOR: Enduring Resources, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
3. ADDRESS OF OPERATOR: 475 17th Street, Suite 1500 CITY Denver STATE CO ZIP 80202		7. UNIT or CA AGREEMENT NAME: N/A
PHONE NUMBER: (303) 350-5114		8. WELL NAME and NUMBER: Buck Camp 11-22-11-36
4. LOCATION OF WELL FOOTAGES AT SURFACE: 494' FNL - 482' FWL S.L.B.& M.		9. API NUMBER: 4304736277
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 36 11S 22E		10. FIELD AND POOL, OR WILDCAT: Wildcat
COUNTY: Uintah		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: 9/30/2008	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input checked="" type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Commingling</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	<u>Conformation</u>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

This well had first sales on March 29, 2006.

Conformation that well was commingled in the Wasatch and Mesaverde formations "pools" in the initial completion attempt.

NAME (PLEASE PRINT) <u>Alvin R. (Al) Arlian</u>	TITLE <u>Landman - Regulatory Specialist</u>
SIGNATURE <u>[Signature]</u>	DATE <u>9/30/2008</u>

(This space for State use only)

RECEIVED

OCT 06 2008

DIV. OF OIL, GAS & MINING



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

September 4, 2014

CERTIFIED MAIL NO.: 7011 2970 0001 8828 1610

43 047 36277

Buck Camp 11-22-11-36

36 11S 22E

Mr. John Conley
Enduring Resources, LLC
511 16TH Street STE 700
Denver, CO 80202

Subject: Extended Shut-in and Temporary Abandoned Well Requirements for Fee or State Leases

Dear Mr. Conley:

As of April 2014, Enduring Resources, LLC (Enduring) has twenty (20) State Lease Wells and six (6) Fee Lease Wells (see attachment A) that are currently in non-compliance with the requirements for extended shut-in or temporarily abandoned (SI/TA) status. Four (4) wells in 2013 and seven (7) wells in 2014 were added to Enduring's SI/TA list.

Several of these wells (attachment A) have previously been issued notices of non-compliance and have remained in non-compliance. The Division has worked with Enduring to reduce the immense amount of wells that were in non-compliance. In 2010 Enduring provided the Division with a list of wells to be plugged (attachment A), and the Division recognizes that Enduring most recently plugged a number of wells in 2012. However in 2013 only two wells were plugged while four (4) additional wells were added, while nothing has been done in 2014 on any of the wells. Enduring never submitted plugging procedures for the remaining wells listed to be plugged and therefore has not followed through with these plans to bring these wells or any other wells into compliance.

Enduring shall immediately submit plans and timeframes for each well stating which wells will be plugged, placed back on production, or requesting SI/TA extension with proof of wellbore integrity and good cause for such request. All wells need an individual sundry filed and are required to meet the SI/TA rules as listed below.

Wells SI/TA beyond twelve (12) consecutive months requires filing a Sundry Notice (R649-3-36-1). Wells with five (5) years non-activity or non-productivity shall be plugged, unless the Division grants approval for extended shut-in time upon a showing of good cause by the operator (649-3-36-1.3.3). For extended SI/TA consideration the operator shall provide the Utah Division of Oil, Gas & Mining with the following:

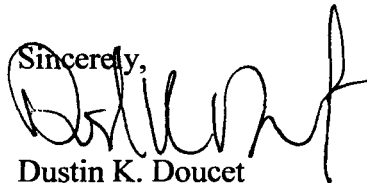
1. Reasons for SI/TA of the well (R649-3-36-1.1)
2. The length of time the well is expected to be SI/TA (R649-3-36-1.2), and
3. An explanation and supporting data if necessary, for showing the well has integrity, meaning that the casing, cement, equipment condition, static fluid level, pressure, existence or absence of Underground Sources of Drinking Water and other factors do not make the well a risk to public health and safety or the environment (R649-3-36-1.3).

Please note that the Divisions preferred method for showing well integrity is by MIT

Submitting the information suggested below may help show well integrity and may help qualify your well for extended SI/TA. **Note: As of July 1, 2003, wells in violation of the SI/TA rule R649-3-36 may be subject to full cost bonding (R649-3-1-4.2, 4.3).**

1. Wellbore diagram, and
2. Copy of recent casing pressure test, and
3. Current pressures on the wellbore (tubing pressure, casing pressure, and casing/casing annuli pressure) showing wellbore has integrity, and
4. Fluid level in the wellbore, and
5. An explanation of how the submitted information proves integrity.

If the required information is not received within 30 days of the date of this notice, further actions may be initiated. If you have any questions concerning this matter, please contact me at (801) 538-5281.

Sincerely,

Dustin K. Doucet
Petroleum Engineer

DKD/JP/js

cc: Compliance File
Well File
LaVonne Garrison, SITLA
N:\O&G Reviewed Docs\ChronFile\PetroleumEngineer\SITA

ATTACHMENT A

	Well Name	API	LEASE	Years Inactive	Prior Notice	Proposed PA
1	AGENCY DRAW 12-21-31-36	43-047-36424	ML 47086	7 years 10 months	1 ST NOTICE	12/31/2014
2	ASPHALT WASH 11-24-42-16	43-047-36875	ML 47080	7 years 11 months	1 ST NOTICE	12/31/2014
3	ARCHY BENCH 11-24-24-32	43-047-36819	ML 49762	7 years 1 month	1 ST NOTICE	12/31/2012
4	SOUTHAM CYN 10-25-11-6	43-047-36933	FEE	7 years	1 ST NOTICE	12/31/2012
5	N HORSESHOE 3-13-6-21	43-047-37391	ML 49317	5 years 6 months	2 ND NOTICE	Extension valid to 9/1/2014
6	BUCK CAMP 12-22-21-2	43-047-37656	ML 47087	6 years 8 months	1 ST NOTICE	12/31/2014
7	DWR 12-23-13-21	43-047-33344	FEE	6 years		12/31/2014
8	DWR 12-23-31-21	43-047-33484	FEE	5 years 4 months	1 ST NOTICE	12/31/2013
9	ARCHY BENCH 12-23-42-16	43-047-36802	ML 48957	6 years 1 month		12/31/2014
10	ARCHY BENCH 11-24-12-32	43-047-36822	ML 49762	5 years 5 months		12/31/2013
11	ROCK HOUSE 10-22-33-36	43-047-37789	ML 49959	5 years 5 months		12/31/2014
12	HANGING ROCK 11-23-24-36	43-047-38278	ML 50085	5 years 3 months		5/18/2012
13	N WALKER HOLLOW 2-32-6-23	43-047-37399	ML 47777	4 years 7 months	1 ST NOTICE	
14	BUCK CAMP 12-22-31-2	43-047-36273	ML-47087	3 years 6 months		
15	SOUTHAM CYN 9-24-13-36	43-047-38910	FEE	3 years 9 months		
16	DWR 12-23-12-28	43-047-33343	FEE	2 years 6 months		
17	BONANZA 9-24-11-16	43-047-35622	ML-46526	2 years 6 months		
18	ROCK HOUSE 10-22-32-36	43-047-36409	ML-47061	2 years 5 months		
19	BUCK CYN 12-21-43-16	43-047-37091	ML-47085	2 years 6 months		
20	BUCK CAMP 11-22-11-36	43-047-36277	ML-47077	2 years 1 month		
21	HANGING ROCK 11-23-42-36	43-047-38280	ML-50085	2 years 2 months		
22	HANGING ROCK 11-23-43-36	43-047-38282	ML-50085	1 years 5 months		
23	ROCK HOUSE 10-22-21-36	43-047-36407	ML-47061	2 years 2 months		
24	ROCK HOUSE 10-23-21-30	43-047-37832	FEE	2 years 3 months		
25	SOUTHMAN CYN 9-23-21-36	43-047-36530	ML-47782	2 years		
26	SOUTHMAN CYN 9-23-33-36	43-047-35363	ML-47782	1 year 9 months		

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47077
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
		7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: BUCK CAMP 11-22-11-36	
2. NAME OF OPERATOR: Enduring Resources, LLC	9. API NUMBER: 43047362770000	
3. ADDRESS OF OPERATOR: 511-16th Street, Suite 700, Denver, CO, 80202	PHONE NUMBER: 303 350-5114 Ext	9. FIELD and POOL or WILDCAT: BUCK CANYON
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0494 FNL 0482 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 36 Township: 11.0S Range: 22.0E Meridian: S	COUNTY: UINTAH	
		STATE: UTAH

11.

CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 9/21/2016	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input checked="" type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

P&A Procedure attached.

**Approved by the
 Utah Division of
 Oil, Gas and Mining**

Date: September 19, 2016

By: 

Please Review Attached Conditions of Approval

NAME (PLEASE PRINT) Travis Whitham	PHONE NUMBER 303 350-5716	TITLE Landman
SIGNATURE N/A		DATE 9/13/2016



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43047362770000

- 1. Notify the Division at least 24 hours prior to conducting abandonment operations. Please call Dan Jarvis at 801-538-5338.**
- 2. Add Plug #3: A 100' (10 sk) cement plug shall be balanced from 2800' to 2700' to isolate the Base of Moderately Saline Groundwater as required by R649-3-24-3.3.**
- 3. Amend Plug #4: Perf is not necessary if cement plug is set inside casing from a minimum of 2100' to 1950' (12 sx). CBL indicates good cement up to top of logged interval at $\pm 2000'$.**
- 4. All balanced plugs shall be tagged to ensure they are at the depths specified in the procedure.**
 - 5. All annuli shall be cemented from a minimum depth of 100' to the surface.**
- 6. Surface reclamation shall be done in accordance with R649-3-34 – Well Site Restoration.**
- 7. All requirements in the Oil and Gas Conservation General Rule R649-3-24 shall apply.**
- 8. If there are any changes to the procedure or the wellbore configuration, notify Dustin Doucet at 801-538-5281 (ofc) or 801-733-0983 (home) prior to continuing with the procedure.**
- 9. All other requirements for notice and reporting in the Oil and Gas Conservation General Rules shall apply.**

9/19/2016

Wellbore Diagram

r263

API Well No: 43-047-36277-00-00

Permit No:

Well Name/No: BUCK CAMP 11-22-11-36

Company Name: ENDURING RESOURCES, LLC

Location: Sec: 36 T: 11S R: 22E Spot: NWNW

Coordinates: X: 635971 Y: 4409315

Field Name: BUCK CANYON

County Name: UTAH

String Information

String	Bottom (ft sub)	Diameter (inches)	Weight (lb/ft)	Length (ft)	Capacity (f/cf)
COND	40	20			
HOL1	1991	12.25			
SURF	1991	8.625	24		
HOL2	6899	7.785			
PROD	6899	4.5	11.6		11.459

Conductor: 20 in. @ 40 ft.

Hole: Unknown

$\frac{100'}{(1.15)}(11.459) = 85x$ $8\frac{5}{8}" \times 4\frac{1}{2}"$ → 4.046
 $\frac{100'}{(1.15)}(4.046) = 225x$ $7\frac{7}{8}" \times 4\frac{1}{2}" (108)$ → 3.347
305x total

Cement from 1991 ft. to surface

Surface: 8.625 in. @ 1991 ft.

Hole: 12.25 in. @ 1991 ft.

Cement Information

String	BOC (ft sub)	TOC (ft sub)	Class	Sacks
PROD	6899	2000	50	1219
PROD	6899	2000	HG	75
SURF	1991	0	HG	160
SURF	1991	0	G	320

TOC
2000' ?
COC Run to
2000' only

$\frac{100'}{(1.15)}(11.459) = 125x$
 * Amend Plug #4
 * Perf. not required
 set plug fr. 2100' to 1950'

2700'
BMSW
2839'
WSTC

* Add Plug #3

100' plug fr 2800' to 2700'
 ± 105x

Perforation Information

Top (ft sub)	Bottom (ft sub)	Shts/Ft	No Shts	Dt Squeeze
4562	6548			

Plug #2

$105x = 131'$
 TOC @ 4381' ✓ or.

Plug #1

$(105x)(1.15)(11.459) = 131'$
 TOC @ 5292' ✓ or.

Formation Information

Formation	Depth
BMSW	2700
WSTC	2839
MVRD	4770
BUKTG	6808

Cement from 6899 ft. to 2000 ft.

Production: 4.5 in. @ 6899 ft.

Hole: 7.785 in. @ 6899 ft.

Hole: Unknown

TD: 6914 TVD: PBD: 6855



Recommended Procedure

Plug and Abandonment

Operator:	Enduring Resources, LLC		
Well name:	Buck Camp Unit #10-22-11-36		
Legal:	NWNW, Section 36, Township 11 South, Range 22 East		
Location:	Uintah County, Utah		
API:	43-047-36277		
Surface:	8-5/8" 24# at 1,979'	Hole size: 12-1/4"	TOC: Surface
Production:	4-1/2" 11.6# at 6,899'	Hole size: 7-7/8"	TOC: 2,035' (CBL)
Tubing:	2-3/8" 4.7# at 5,434'		
Perforations:	4,562' (Wasatch); 5,473', 6,147', 6,187', 6,248', & 6,348' (Mesaverde)		
PBTD:	6,792'		
TD:	6,914'		

Procedure based off of completion reports and well history, this is NOT a final procedure

1. Conduct pre-job safety meeting and complete daily JSA
 2. Prior to MIRU, check rig anchors and blow down well/kill if necessary
 3. Dig out around wellhead and check surface annulus for pressure
(If present call Tommy Joyce #817-933-9759 and Craig Owen #970-646-3933 for orders)
 4. MIRU P&A equipment, NDWH, NUBOP, Load and circulate wellbore clean
 5. TOH and tally 5,423' of tubing to derrick
 6. PU 4-1/2" 11.6# casing scraper/bumper sub, TIH to 5,423', TOH, LD BHA
 7. PU 4-1/2" 11.6#, 10K, CIBP, TIH and set at 5,423' (50' above topmost Mesaverde perms)
 8. Pump 10 sxs of 15.8# class G neat 1.15 cu.ft./sack yield cement on top of CIBP
(10 sxs is 131' in 4-1/2", TOC: 5,292')
 9. TOH and LD to 5,150', Reverse circulate tubing clean
 10. Pump 8 bbl. of water treated with corrosion inhibitor to 4,634'
 11. TOH, Stand back 4,512'
 12. PU 4-1/2" 11.6#, 10K, CIBP, TIH and set at 4,512' (50' above topmost Wasatch perms)
 13. Pump 10 sxs of 15.8# class G neat 1.15 cu.ft./sack yield cement on top of CIBP
(10 sxs is 131' in 4-1/2", TOC: 4,381')
 14. TOH and LD to 4,250', Reverse circulate tubing clean, Pressure test casing to 500 psi for 5 minutes
(If test fails call Tommy Joyce and Craig Owen for orders)
- Note: If casing pressure test fails (step 14) additional steps/services required by the Utah DOGM/BLM are not included in this bid and will be billed per our 2016 Time and Material Price Schedule.
15. Circulate 65 bbl. of water treated with corrosion inhibitor
 16. TOH, Stand back 1,979'
 17. RU wireline, TIH and perforate casing at 2,029', TOH, RD wireline
 18. Establish IR/circulation to surface via perforations
 19. PU 4-1/2" 11.6#, 10K, CICR, TIH and set at 1,979', Establish IR into CICR
(If not able to establish IR call Tommy Joyce and Craig Owen for orders)
 20. Pump 80 sxs of 15.8# class G neat 1.15 cu.ft./sack yield cement, 70 sxs under and 10 sxs on top
(4 sxs is 52' in 4-1/2", 10 sxs is 50' in 4-1/2" x 7-7/8", 21 sxs is 104' in 4-1/2" x 8-5/8" with 100% excess)
(10 sxs is 131' in 4-1/2", TOC: 1,848')
 21. TOH to 1,750', Reverse circulate tubing clean
 22. TOH and LD to 100', Establish circulation to surface
 23. Circulate 8 sxs of 15.8# class G neat 1.15 cu.ft./sack yield cement to surface
 24. TOH and LD tubing, Dig out and cut off wellhead 6' below restored ground level
 25. TIH 100' in 4-1/2" x 8-5/8" with 1" tubing, Establish circulation to surface
 26. Circulate 21 sxs of 15.8# class G neat 1.15 cu.ft./sack yield cement to surface



27. TOH and LD tubing, RDMO, Top off if necessary
28. Weld on info plate, backfill, clean location, P&A complete

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ML-47077
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: Enduring Resources, LLC		7. UNIT or CA AGREEMENT NAME:
3. ADDRESS OF OPERATOR: 511-16th Street, Suite 700 , Denver, CO, 80202		8. WELL NAME and NUMBER: BUCK CAMP 11-22-11-36
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0494 FNL 0482 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 36 Township: 11.0S Range: 22.0E Meridian: S		9. API NUMBER: 43047362770000
9. FIELD and POOL or WILDCAT: BUCK CANYON		COUNTY: UINTAH
STATE: UTAH		
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 9/27/2016	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input checked="" type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Plugging report attached. Well waiting on reclamation and re-seeding planned next spring.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 04, 2016		
NAME (PLEASE PRINT) Travis Whitham	PHONE NUMBER 303 350-5716	TITLE Landman
SIGNATURE N/A	DATE 9/28/2016	

Enduring Resources
Chronological Plugging Report
Buck Camp 11-22-11-36

9/25/16

Move in RIG and Equipment & RU.

9/26/16

Notified Richard Powell of intent to plug on 9/24/16

Flowing TBG & CSG psi 200. HSM: ND & NU

Bled well down. Pumped 60 bbls H2O, with H2S Scavenger, down CSG Flushed TBG with 30 bbls Fresh water. ND well head NU BOPES, RU floor tongs etc. Tally out of hole. With 166 Jts PSN 1 JT with NC. RIH with scraper to 5445, POOH LD scraper RIH w/ 4 1/2" CIBP Set @ 5413, spot 8 bbls corr Inhib Mix & pump 10 sxs, 15.8 ppg, 1.15 Yield, Flushed with 19 bbls fresh. Cement top 5,282 LD to 4500'. Pooh LD setting tool
SWIFN.

9/27/16

HSM, LD TBG

"O" PSI on well. RIH with 4 1/2" CIBP & set @ 4502'. Displaced Hole with, corr Inhib Test CSG to 600 psi, 5 min Good. Spot 131' plug on CIBP to 4371' with 10 sxs 2.04 bbls, 1.15 yield, 15.8 ppg. LD to 2805 spot 131' balanced plug to 2671'. Across Wasatch formation With 10 sxs, 2.04 bbls, 2.15 yield, 15.8 ppg. LD to 2123', Spot balanced plug to 1886' across, shoe joint With 18 sxs, 3.7 bbls, 1.15 yield, 15.8 ppg. LD to 131' filled 4 1/2 with 12.5 sxs, 2.5 bbls, 1.15 yield, 15.8 ppg. RD floor tongs etc, ND BOPES, RD Rig. Dug out around well head. Surface CSG had 200 psi. Bled well down, spitting foamy water, bled down 1 1/2 hrs. Filled slowly with water 3-4 bbls. Cut off TBG CSG head. RIH with 100' of 1" TBG, filled 4 1/2 With cement. Mixed and pumped 25.5 sxs 5.2 bbls, filled 8 5/8 x 4 1/2. Weld on P & A marker.